STUDIES OF FROST AND ICE CRYSTALS.

BY WILSON A. BENTLEY. Dated Jericho, Vt., May 28, 1906. Revised July, 1907.

(Continued from November Review.)

TABLE 4.—*List of photographs, with dates and references to the text.*

Photograph number.	Section number.	Magnification.	Date.	Photograph number.	Section number.	Magnification.	Date.
0	11	2	Feb., 1904	93	50,52	20	Mar. 10, 1904
1	11	15	Dec., 1884	94	54	20	Mar. 10, 1904
2	11	30	Jan., 1885	95	32	8	Mar. 16, 1904
3	32	4	Jan., 1885	96	17	8	Mar. 28, 1904
4	32	6	Feb., 1885	97	17	8	Mar. 28, 1904
5	32	28	Jan., 1885	98	17	8	Mar. 29, 1904
6	11	25	Jan., 1885	99	17	9	Mar. 29, 1904
7	12	35	Feb., 1885	100	31,44	6	Dec. 4, 1904
8	13	25	1886	101	50,53	6	Dec. 4, 1904
9	11	25	1886	102	32	8	Dec. 6, 1904
10	32	26	1886	103	32,44	8	Dec. 6, 1904
11	14	20	1886	104	32	6	Dec. 9, 1904
12	11	25	1886	105	32	6	Dec. 10, 1904
13	15	8	1888	106	32,44	8	Dec. 11, 1904
14	15	8	1888	107	31,44	6	Dec. 11, 1904
15	14	8	1888	108	31,44	8	Dec. 11, 1904
16	14	8	1888	109	32	6	Dec. 11, 1904
17	44	30	1888	110	15	4	Dec. 13, 1904
20	12	96	1899	111	15	4	Dec. 13, 1904
21	32	8	1898	112	32	6	Dec. 13, 1904
22	32	6	1899	113	50	1/4	Dec. 13, 1904
23	32	6	1889	115	33	8	Dec. 18, 1904
24	14	6	1889	116	20	12	Dec. 18, 1904
25	31	1/3	1890	117	33,36	6	Dec. 18, 1904
26	11	25	1892	118	11	20	Dec. 18, 1904
27 A	16	24	1893	119 A	32	8	Dec. 19, 1904
27 B	19	12	Nov. 14, 1905	119 B	32	6	Feb. 25, 1907
27 C	19	25	Nov. 14, 1905	120	38	6	Dec. 20, 1904
28 A	40	1	Dec. 21, 1899	121	38	6	Dec. 20, 1904
28 B	40	1	Dec. 21, 1899	122	32,44	6	Dec. 24, 1904
29	31	1/2	1900	123	32	4	Dec. 24, 1904
30	33	8	1901	124	32	6	Dec. 24, 19 4
31	33	8	1901	125	32,44	6	Dec. 24, 1904
32	36,39	8	1902	126	31	4	Dec. 25, 1904
33	12	30	1902	127	38	8	Dec. 26, 1904
34	12	30	1899	128	32,44	6	Dec. 28, 1904
35 A	19	12	1902	129	36	8	Dec. 30, 1904
36 A	18,19	2	Oct. 22, 1905	130	33	6	Jan. 3, 1905
36 B	18	12	Mar. 28, 1906	131	33	6	Jan. 3, 1905
36 C	18	12	Mar. 28, 1906	132	33,38	6	Jan. 3, 1905
36 D	18	16	Oct. 7, 1905	133	50,51	15	Jan. 6, 1905
36 E	18	2	Oct. 26, 1905	134	50,51	15	Jan. 6, 1905
37	20	10	1902	135	50,51	15	Jan. 5, 1905
38 A	11	20	Dec. 4, 1903	136	50,51,52,53	1/3	Jan. 5, 1905
38 B	11	20	Dec. 4, 1903	138	50,51,52	1/3	Jan. 5, 1905
38 C	11	2	Nov. 21, 1905	139	50,51,52	2	Jan. 5, 1905
38 D	11	2	Nov. 21, 1905	140	50,51,52,53	1/3	Jan. 5, 1905
40	32	6	1903	142	50,51,52	2	Jan. 5, 1905
42	32,33	6	Dec. 6, 1903	143	32	4	Jan. 7, 1905
43	32	6	Dec., 1903	144	32,44	6	Jan. 7, 1905
44	31	1/3	Jan. 17, 1904	145 A	32,35	8	Jan. 13, 1905
45	31	1/3	Jan. 25, 1904	145 B	32	6	Dec. 18, 1906
46	11	8	Jan. 19, 1904	146	33	6	Jan. 13, 1905
47 A	13	15	Jan. 19, 1904	147	33	6	Jan. 13, 1905
47 B	13	20	Jan. 19, 1904	148	33,44	8	Jan. 13, 1905
48	31,32,44	1/3	Jan. 21, 1904	149	54	15	Jan. 13, 1905
49	50,51	40	Jan. 25, 1904	150	50,53	1/4	Jan. 14, 1905
50	50	40	Jan. 25, 1904	151	50	1/4	Jan. 14, 1905
51	50	1/3	Jan. 25, 1904	152	50	8	Jan. 14, 1905
52	50	1/3	Jan. 25, 1904	153	54	8	Jan. 14, 1905
53	36	8	Jan. 26, 1904	154 A	16,34	8	Jan. 15, 1905
54	32	8	Jan. 26, 1904	154 B	16,34,35	8	Jan. 15, 1905
55	32	6	Jan. 26, 1904	155	11	20	Jan. 23, 1905
56	32	6	Jan. 27, 1904	156	37	30	Jan. 24, 1905
58 A	34,36	8	Feb. 1, 1904	157	37	20	Jan. 24, 1905
58 B	34,36,39	6	Feb. 1, 1904	158	14	1/10	Jan. 24, 1905
59	34,36,39	8	Feb. 2, 1904	159	14	2	Feb. 5, 1905
60	32	8	Feb. 2, 1904	160	14	1/10	Jan. 24, 1905
61	12	35	Feb. 2, 1904	161	16,35	25	Jan. 25, 1905
62	50,51,52	60	Feb. 4, 1904	162	22	10	Jan. 25, 1905
63	50	1/3	Feb. 5, 1904	163	22	10	Jan. 25, 1905
64	32	6	Feb. 8, 1904	164	50,53,54	8	Jan. 25, 1905
65	32	6	Feb. 8, 1904	165	54	1/2	Jan. 25, 1905
66 A	50,51	1/3	Feb. 8, 1904	166	32,40	6	Jan. 28, 1905
66 B	32	8	Feb. 8, 1904	167	32	4	Jan. 28, 1905
67	32	1/3	Feb. 8, 1904	168	15	8	Jan. 31, 1905
68 A	50,51	30	Feb. 10, 1904	169	15	8	Jan. 31, 1905
68 B	50,51	30	Feb. 10, 1904	170	15	1/10	Jan. 31, 1905
69	32,33	6	Feb. 15, 1904	171	36	32	Feb. 1, 1905
70	32	8	Feb. 15, 1904	172	15	3	Feb. 1, 1905
72	50,51	30	Feb. 16, 1904	173	15	3	Feb. 1, 1905
73	33	6	Feb. 16, 1904	174	15	3	Feb. 1, 1905
74	50,52	60	Feb. 26, 1904	175	34	3	Feb. 2, 1905
75	50	60	Feb. 26, 1904	176	34	1/3	Feb. 3, 1905
77	32	6	Mar. 4, 1904	177	33	1/3	Feb. 3, 1905
78	50	40	Mar. 4, 1904	178	34	3	Feb. 3, 1905
79	50,52	30	Mar. 4, 1904	179	33	4	Feb. 3, 1905
80	44	60	Mar. 4, 1904	180 A	36	24	Feb. 3, 1905
81	44	60	Mar. 4, 1904	180 B	36	4	Feb. 3, 1905
82	50	35	Mar. 4, 1904	182	50,53	1/4	Feb. 3, 1905
83	50	30	Mar. 4, 1904	183	50,53	1/4	Feb. 3, 1905
84	54	16	Mar. 4, 1904	185	31	1	Feb. 3, 1905
85	32	8	Mar. 7, 1904	186	31	1/4	Feb. 3, 1905
86	38	6	Mar. 9, 1904	187	31	2/3	Feb. 4, 1905
87	54	20	Mar. 10, 1904	188	34	3	Feb. 5, 1905
88	50,51,52	25	Mar. 10, 1904	189	50,52	2	Feb. 5, 1905
89	50	25	Mar. 10, 1904	190	14	6	Feb. 5, 1905
91	50	1/8	Mar. 10, 1904	191	11	6	Feb. 5, 1905
92	50,54	25	Mar. 10, 1904	192	31	4	Feb. 5, 1905

TABLE 4.—*List of photographs, with dates, etc.*—Continued.

Photograph number.	Section number.	Magnification.	Date.	Photograph number.	Section number.	Magnification.	Date.
193	31	1	Feb. 8, 1905	238	68	3	Feb., 1906
194	32	1/3	Feb. 8, 1905	239 A	68	1	Feb., 1906
195	33	6	Feb. 8, 1905	239 B	68	1/3	Feb., 1906
196 A	33	6	Feb. 8, 1905	240	68	4	Feb., 1906
196 B	33	6	Feb. 8, 1905	241	69,70	4	Feb., 1906
199	12	20	Feb. 25, 1905	242	69	4	Feb., 1906
201	22	10	Feb. 25, 1905	243	69	4	Feb., 1906
202	32	2	Mar. 2, 1905	244	69	4	Feb., 1906
203	32	1	Mar. 2, 1905	245	69	4	Feb., 1906
204	32	8	Mar. 5, 1905	246	69	4	Feb., 1906
205	32	8	Mar. 5, 1905	247	69	4	Feb., 1906
206	22	15	Mar. 5, 1905	248	69	3	Feb., 1906
207 A	22,23	15	Mar. 9, 1905	249	69	4	Feb., 1906
207 B	23	6	Mar. 9, 1905	250	70,71	4	Feb., 1906
207 C	22	10	Mar. 9, 1905	251	71	4	Mar., 1906
208	15	15	Mar. 9, 1905	252	71	4	Mar., 1906
219	32	6	Mar. 14, 1905	253	71	4	Mar., 1906
220	32	6	Mar. 14, 1905	254	72	4	Mar., 1906
222	32	6	Mar. 15, 1905	255	72	4	Mar., 1906
225	20	12	Mar. 14, 1905	256	72	4	Mar., 1906
226	32	6	Mar. 14, 1905	257	72	4	Mar., 1906
227 A	32	6	Mar. 14, 1905	258	72	4	Mar., 1906
227 B	32	5	Mar. 11, 1907	259	73	3	Mar., 1906
227 C	32	6	Mar. 11, 1907	260	73	3	Mar., 1906
228	60	16	*	261	74	4	Apr., 1906
229 A	60	20	*	262	64,74	4	Apr., 1906
229 B	60	12	*	263	74	1/2	Jan. 7, 1905
230 A	61	1/7	1907	264	66,74	8	Apr., 1906
230 B	57	2	Jan. 1, 1907	265	66,74	4	Apr., 1906
230 C	61	2	Dec. 30, 1906	266 B	77	12	Dec. 21, 1906
230 D	61	5	Dec. 30, 1906	267 A	77	4	Dec. 21, 1906
231	60	3	Mar. 14, 1905	267 B	77	12	Jan. 19, 1907
232	60	1/3	Mar. 14, 1905	268 A	77	3	Jan. 19, 1907
233	68	3	Jan., 1906	268 B	77	12	Jan. 19, 1907
234	68,72	3	Jan., 1906	269 A	77	4	Jan. 19, 1907
235	68	3	Jan., 1906	269 B	77	12	Jan. 19, 1907
236	68	3	Jan., 1906	270	77	12	Dec. 15, 1906
237	68	4	Feb., 1906	271	77	12	Dec. 15, 1906

* Furnished by Prof. Benjamin W. Snow, of Madison, Wis.

The magnifications given in Table 4 and on the original photographs are, in a few cases, larger than belong to the corresponding half-tones, because of the slight reduction necessary to secure uniform size of plates.—EDITOR.

LIST OF TYPES OF CRYSTALS AND NUMBERS OF PHOTOGRAPHS AS REFERRED TO IN THE SECTIONS OF THE PRECEDING TEXT.

Tabular hoarfrost.

Section 11. Type HTA. Superimposed solid hexagons.
Photograph No. 0, 1, 2, 6, 9, 12, 26, 38A, 38B, 38C, 38D, 46, 118, 155, 191.

Section 12. Type HTB. Single solid hexagons.
Photograph No. 7, 20, 33, 34, 61, 199.

Section 13. Type HTC. Solid triangular crystals.
Photograph No. 8, 47A, 47B.

Section 14. Type HTD. Open branch or tree-like structure.
Photograph No. 11, 15, 16, 24, 158, 159, 160, 190.

Section 15. Type HTE. Semiopen branch or tree structure.
Photograph No. 13, 14, 110, 111, 168, 169, 170, 172, 173, 174, 208.

Section 16. Type HTF. Stelliform crystals.
Photograph No. 27A, 154A, 154B, 161.

Section 17. Type HTG. Frost upon and around snow crystals.
Photograph No. 96, 97, 98, 99.

Columnar hoarfrost.

Section 18. Type HCA. Hollow hexagonal columns, tapering.
Photograph No. 36A, 36B, 36C, 36D, 36E.

Section 19. Type HCB. Solid hexagonal columns, long needles.
Photograph No. 27B, 27C, 35A, 36A.

Section 20. Type HCC. Hexagonal funnel crystals, cup-shaped.
Photograph No. 37, 116, 225.

Section 21. Type HCD. Longitudinal segments.
No photographs.

Section 22. Type HCE. Compound crystals.
Photograph No. 162, 163, 201, 206, 207A, 207C.

Section 23. Type HCF. Frost around snow granules.
Photograph No. 207B.

Window frost.

Section 31. Type WLA. Linear crystals.
Photograph No. 25, 29, 44, 45, 48, 100, 107, 108, 126, 185, 186, 187, 192, 193.

Section 32. Type WBB. Branching window frost.
Photograph No. 3, 4, 5, 10, 21, 22, 23, 40, 42, 43, 48, 54, 55, 56, 60, 64, 65, 66B, 67, 69, 70, 77, 85, 95, 102, 103, 104, 105, 106, 109, 112, 119A, 119B, 122, 123, 124, 125, 128, 143, 144, 145A, 145B, 166, 167, 194, 202, 203, 204, 205, 219, 220, 222, 226, 227A, 227B, 227C.

Section 33. Type WFC. Filamentous window frost.
Photograph No. 30, 31, 42, 69, 73, 115, 117, 130, 131, 132, 146, 147, 148, 177, 179, 195, 196A, 196B.
Section 34. Type WMD. Meandering window frost.
Photograph No. 58A, 58B, 59, 154A, 154B, 175, 176, 178, 188.
Section 35. Type WSE. Stelliform crystals.
Photograph No. 145A, 154B, 161.
Section 36. Type WLF. Solid lamellar crystals.
Photograph No. 32, 53, 58A, 58B, 59, 117, 129, 171, 180A, 180B.
Section 37. Type WCG. Columnar forms.
Photograph No. 156, 157.
Section 38. Type WOH. Open-structure forms.
Photograph No. 86, 120, 121, 127, 132.
Section 39. Type WTI. Tooth-shaped crystals.
Photograph No. 32, 58B, 59.
Section 40. Type WFJ. Fibroid crystals.
Photograph No. 28A, 28B.
Section 44. Type WGK. Granular dew-like frost.
Photograph No. 17, 48, 80, 81, 100, 103, 106, 107, 108, 122, 125, 128, 144, 148.

Window ice.

Section 50. Type IFA. Feather-form crystals.
Photograph No. 49, 50, 51, 52, 62, 63, 66A, 68A, 68B, 72, 74, 75, 78, 79, 82, 83, 88, 89, 91, 92, 93, 101, 113, 133, 134, 135, 136, 138, 139, 140, 142, 150, 151, 152, 164, 182, 183, 189.
Section 51. Stages of growth in type IFA.
First stage. Photograph No. 49, 62.
Second stage. Photograph No. 133, 135, 136, 138, 139.
Third stage. Photograph No. 66A, 68A, 68B, 72, 88, 134, 140, 142.
Section 52. Special cases of type IFA.
Photograph No. 62, 74, 79, 88, 93, 136, 138, 139, 140, 142, 189.
Section 53. Other special cases of type IFA.
Photograph No. 101, 136, 140, 150, 164, 182, 183.
Section 54. Type IAB. Arborescent crystals.
Photograph No. 84, 87, 92, 94, 149, 153, 164, 165.

Ordinary massive ice.

Section 57. Structure of old ice.
Photograph No. 230B.
Section 60. Ice crystals embedded in solid ice.
Photograph No. 228, 229A, 229B, 231, 232.
Section 61. Structure of pond ice.
Photograph No. 230A, 230C, 230D.
Section 64. Diversity of types.
Photograph No. 262.
Section 66. Effect of contiguity on growth.
Photograph No. 264, 265.
Section 68. Type MLA. Lanceolate crystals.
Photograph No. 233, 234, 235, 236, 237, 238, 239A, 239B, 240.
Section 69. Type MDB. Discoidal crystals.
Photograph No. 241, 242, 243, 244, 245, 246, 247, 248, 249.
Section 70. Type MHC. Solid hexagonal crystals.
Photograph No. 241, 250.
Section 71. Type MFD. Flower-like crystals.
Photograph No. 250, 251, 252, 253.
Section 72. Type MSE. Spandrelliform crystals.
Photograph No. 254, 255, 256, 257, 258.
Section 73. Type MCF. Coralline crystals.
Photograph No. 259, 260.
Section 74. Miscellaneous additional ice crystals.
Photograph No. 261, 262, 263, 264, 265.

Hail.

Section 77. Winter hailstones.
Photograph No. 266B, 267A, 267B, 268A, 268B, 269A, 269B, 270, 271.

THE END.

THE WEATHER OF THE MONTH.

By Mr. P. C. DAY, Assistant Chief, Division of Meteorological Records.

PRESSURE.

The distribution of mean atmospheric pressure for December, 1907, over the United States and Canada, is graphically shown on Chart VI, and the average values and departures from the normal are shown for each station in Tables I and V.

A comparison of the chart of monthly mean pressure for December, 1907, with that of the preceding month shows a reduction in the mean sea-level pressure over all portions of the United States and Canada, except small areas near the south Atlantic and south Pacific coasts, where slight increases occurred.

The decrease in pressure was most pronounced over the Canadian Maritime Provinces and the north Pacific coast, where it ranged from 0.20 to 0.25 inch. This is the reverse of normal conditions, which show a uniform increase in average pressure from November to December over all portions of the United States, except over the north Pacific coast and northern New England, where the pressure is normally slightly less than in November.

The average sea-level pressure during December, 1907, was from .05 to .15 inch below the normal over practically all portions of the United States and Canada, the only exceptions being the southern parts of California, Arizona, New Mexico, and western Texas, where it was slightly above the normal.

Comparatively high mean pressure, about 30.15 inches, prevailed over the central portions of the Rocky Mountain, Plateau, and Pacific coast districts, and another moderately high area, about 30.10 inches, was maintained over the South Atlantic and east Gulf States.

Pressure averaged unusually low along the entire northern border, decreasing rapidly from about 30.15 inches over northern Wyoming to about 29.85 inches over the Canadian Northwest Provinces and to slightly less over the more eastern Canadian districts.

With the ridge of highest pressure extending from the south Atlantic coast northwesterly to the central Rocky Mountain district and southwesterly to the Pacific coast, the surface winds over all northern districts from the Atlantic to the Pacific and extending into Canada, were largely from southerly points.

Over the east Gulf States, portions of Texas and the southern Rocky Mountain, Plateau, and Pacific coast districts northerly winds were the rule.

From the Mississippi Valley eastward there was a general increase in the surface wind movement, and also over the north Pacific coast district, where the month was an unusually stormy one.

Over the Great Plains and Rocky Mountain and Plateau districts storms were infrequent and the wind movement was correspondingly less than the average.

TEMPERATURE.

It is probable that during no December since 1877 has there been such a universal excess of temperature over the territory from the Mexican boundary northward to the Arctic Circle as is shown by the records for the current month. Only on rare occasions are such large portions of the United States and Canada dominated by similar temperature conditions.

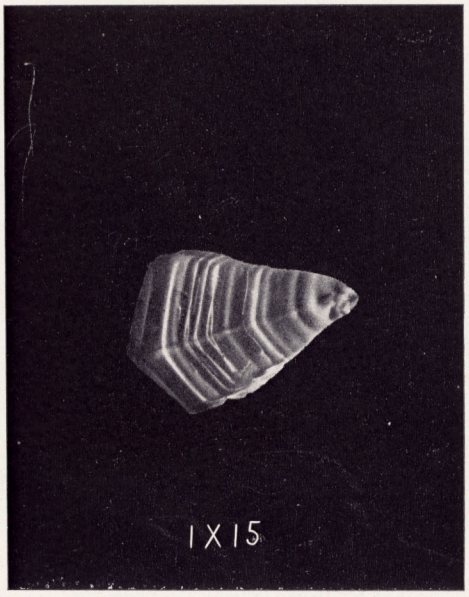
The Rocky Mountain system appears to be a dividing line, on either side of which temperature conditions are generally at variance. If there is an excess or deficiency over the districts to the east, there is generally a compensating deficiency or excess in the districts to the west. During the current month the temperature was in excess of the normal over practically all districts in the United States, and, except at a few points in British Columbia, the whole of Canada appears to have experienced similar conditions.

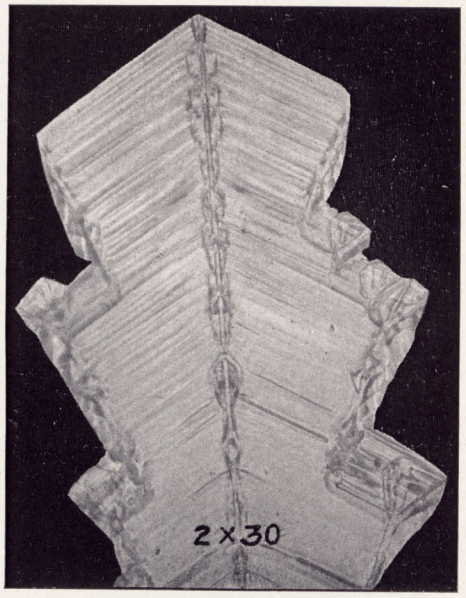
Over nearly all the more northern districts of the United States the average temperature for the month exceeded the normal from 4° to 8°. The excess of temperature was well distributed thru the various decades of the month, the cold periods being confined to the second decade of the month and generally of short duration. A slight deficiency in mean temperature, less than 1° per day, prevailed over eastern Alabama, western and northern Georgia, and western South Carolina.

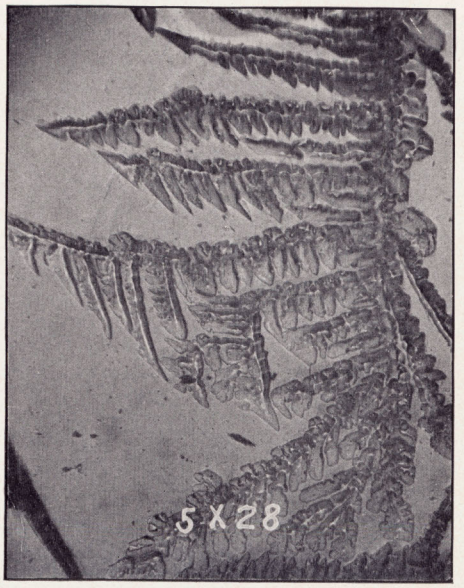
Maximum temperatures were not unusually high or minimum temperatures unusually low over any districts. Maximum temperatures slightly above 80° were recorded over the southern portions of Florida, Texas, and California, while over the upper Lake region, the upper Mississippi Valley, and in the mountain

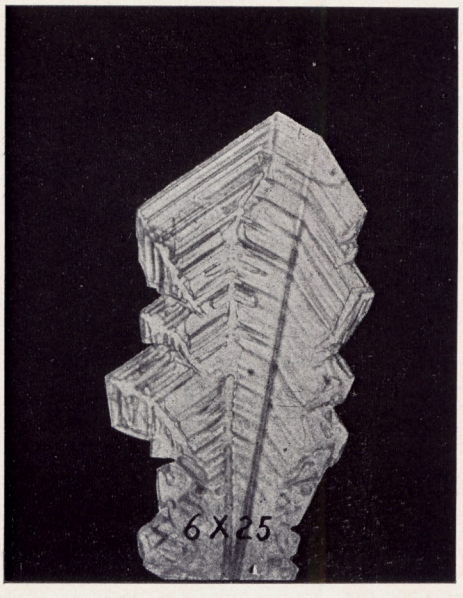
Photomicrographs of Frost and Ice Crystals.

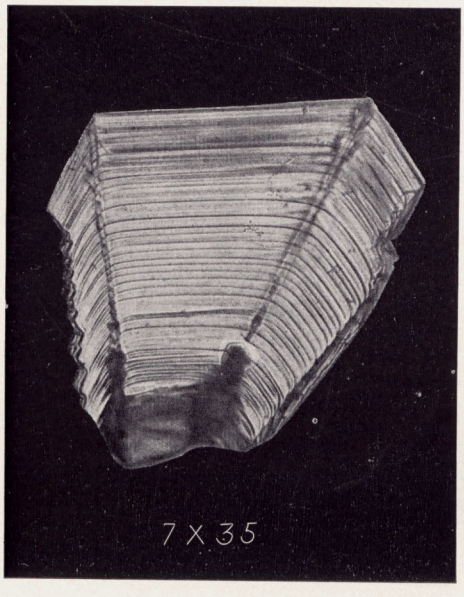
Plate I.

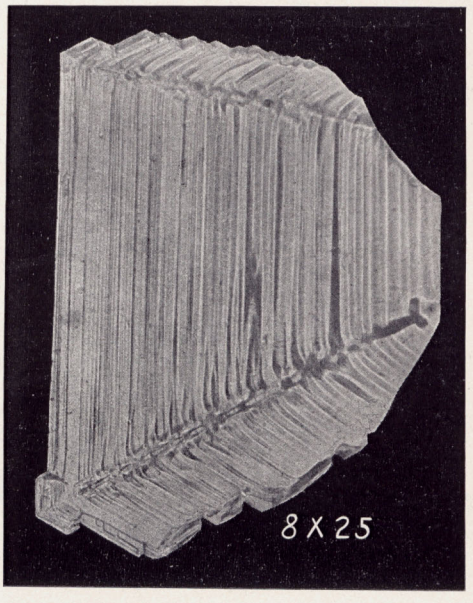


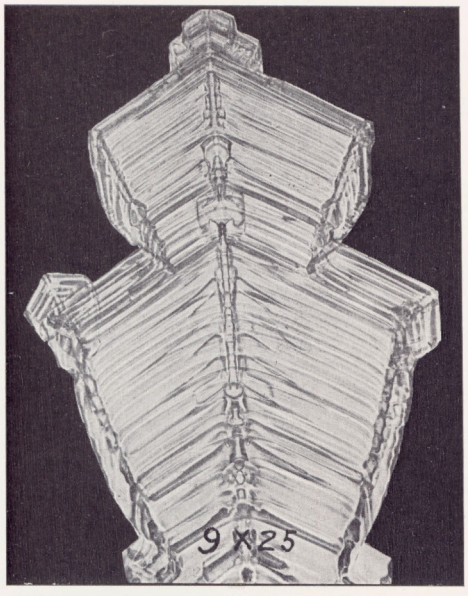








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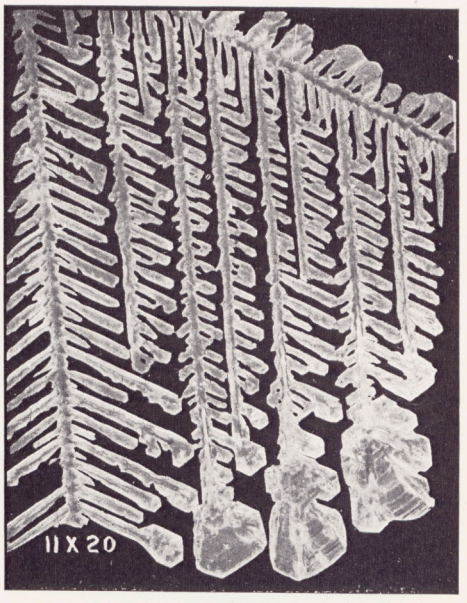
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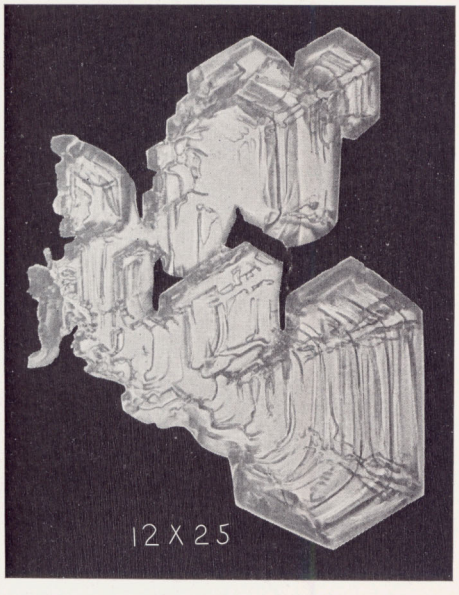
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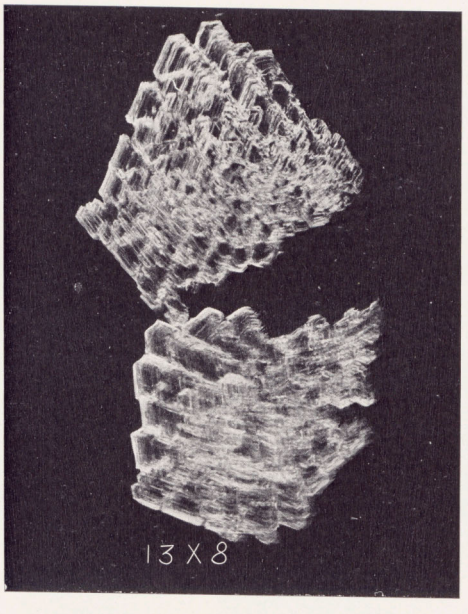
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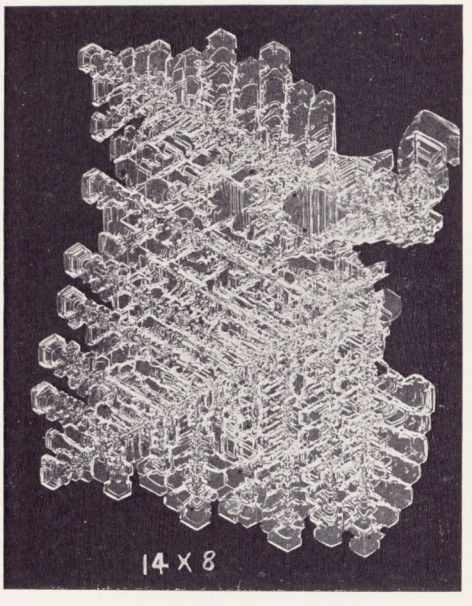
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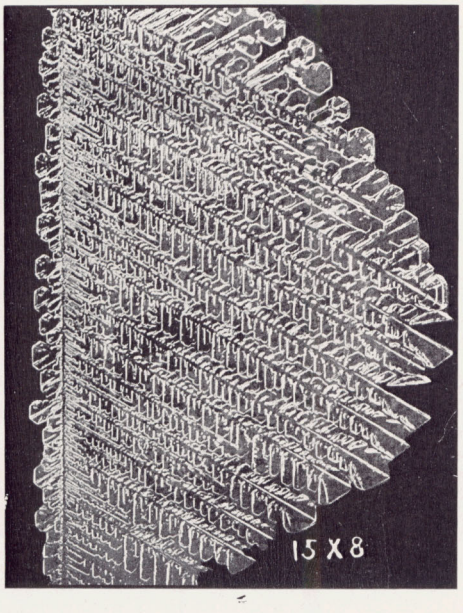
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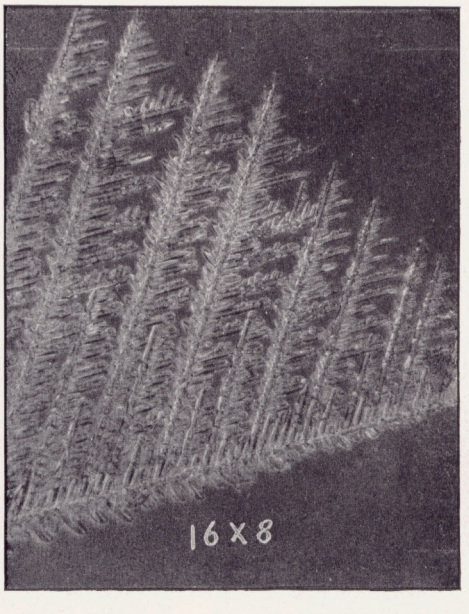
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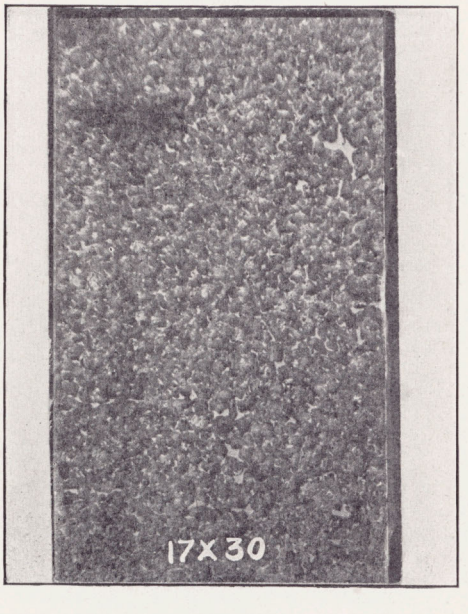
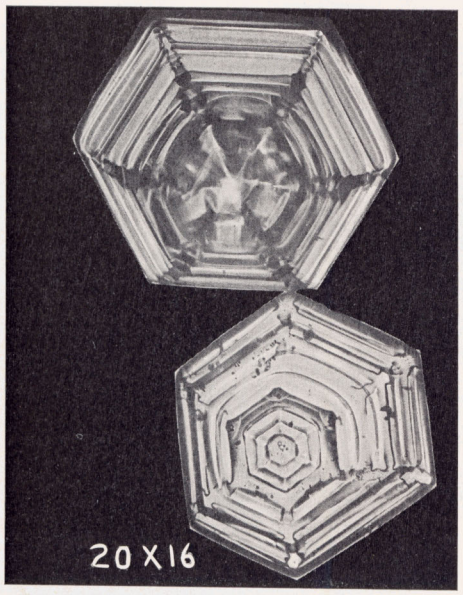

17 X 30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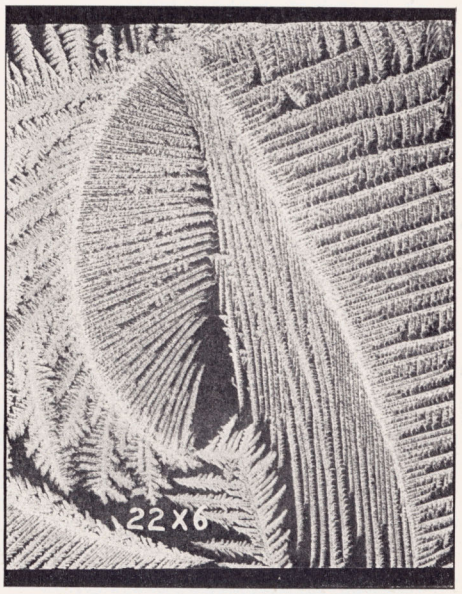
21X8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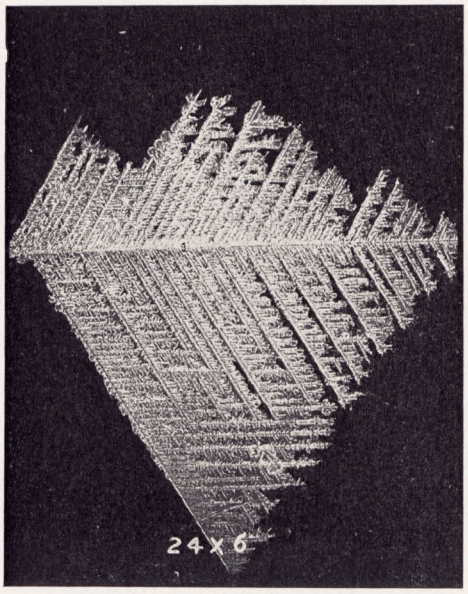
23X6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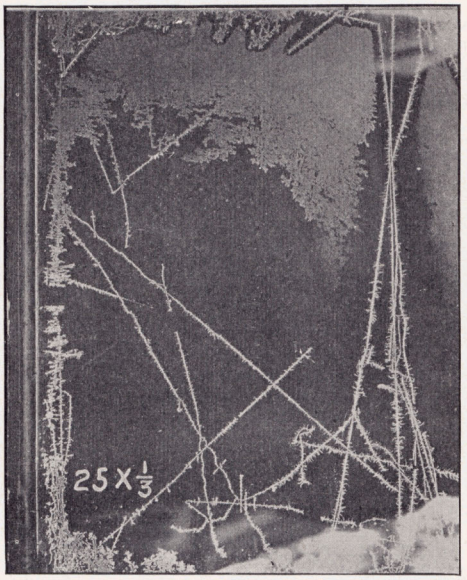
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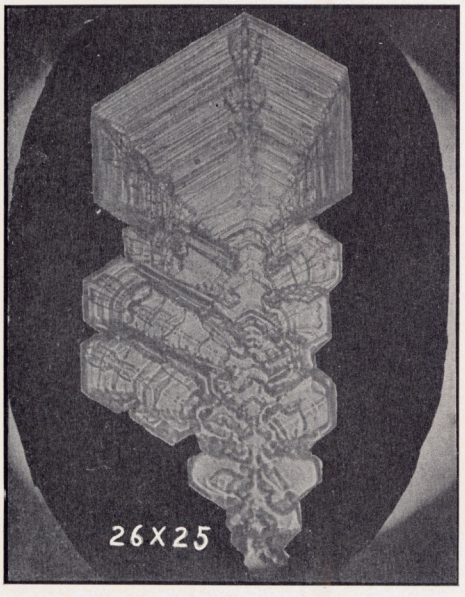
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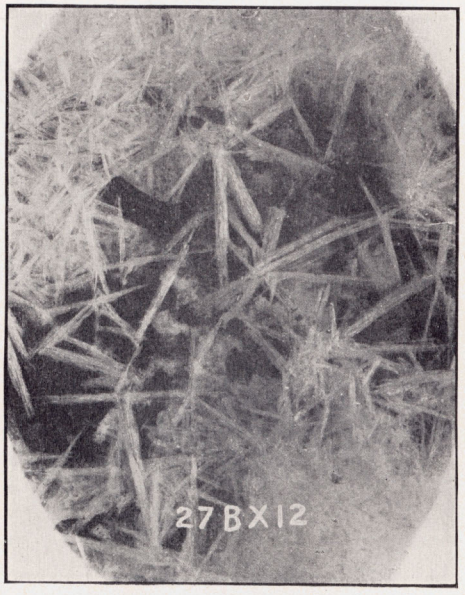
27AX24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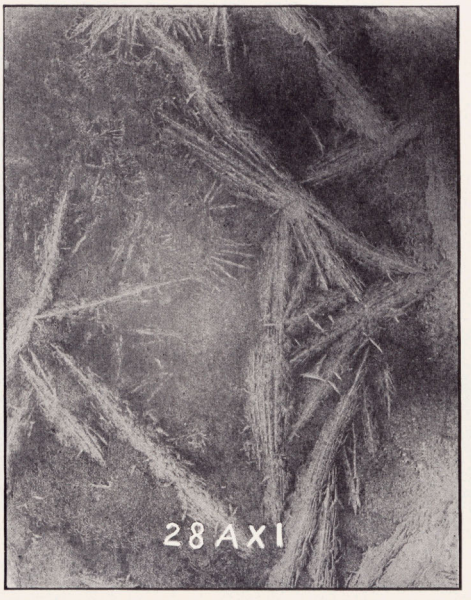
27C X 25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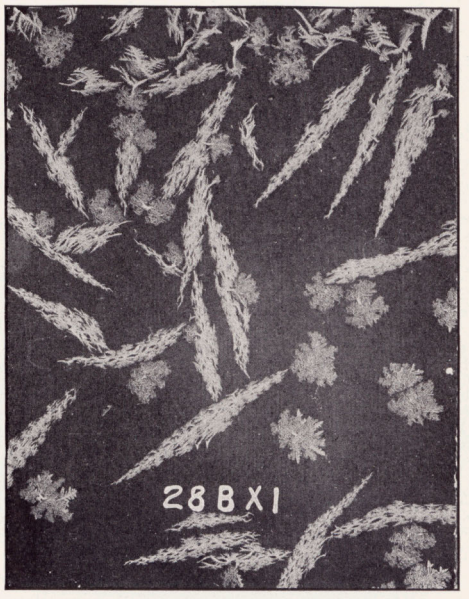
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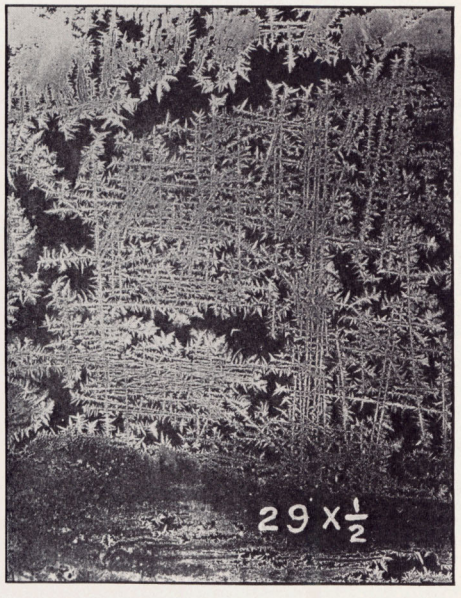
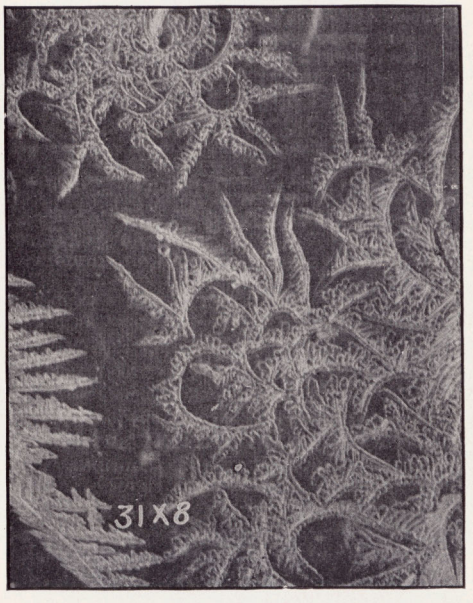

29 X 1/2


30X8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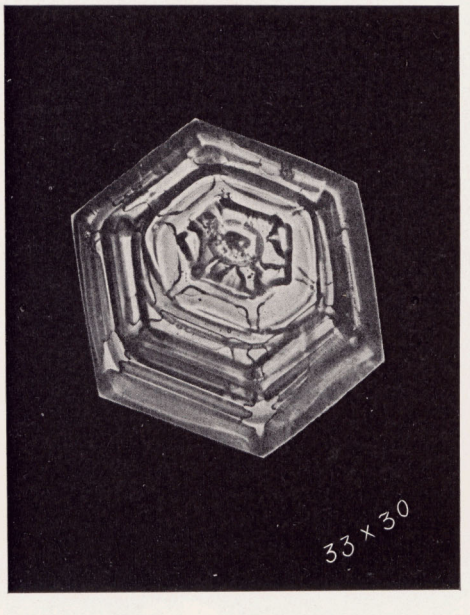
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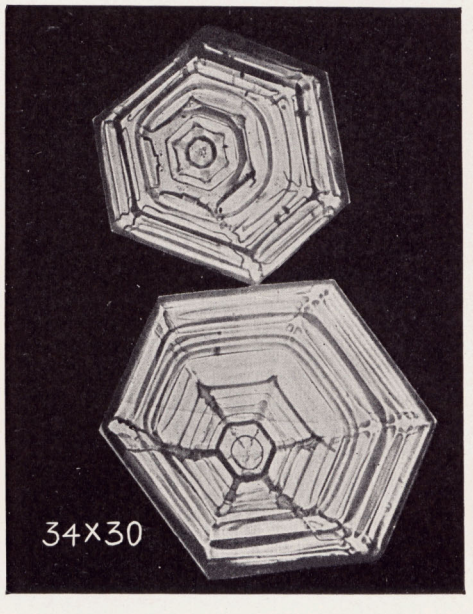
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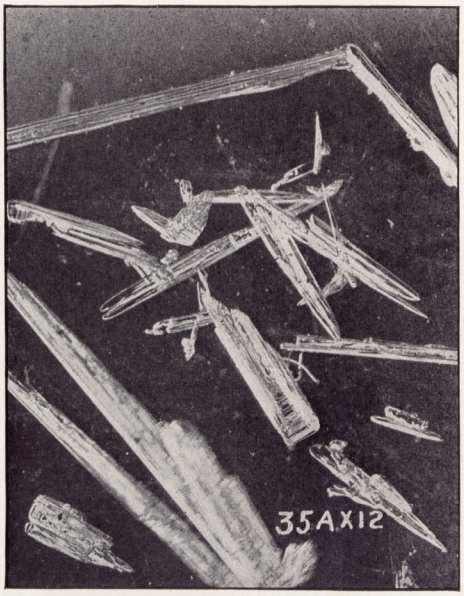
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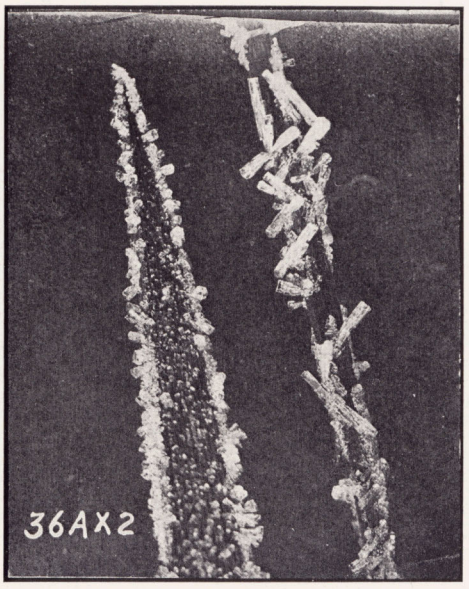
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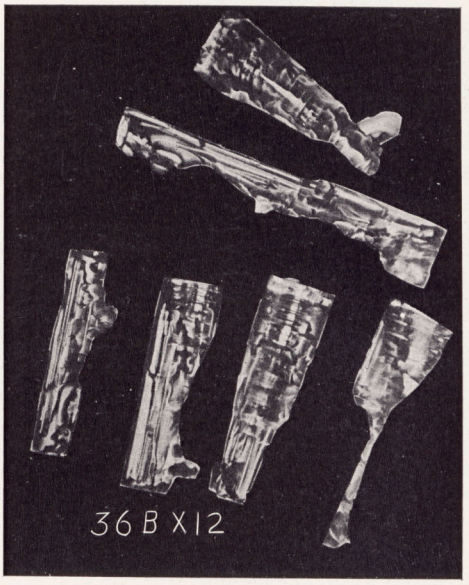
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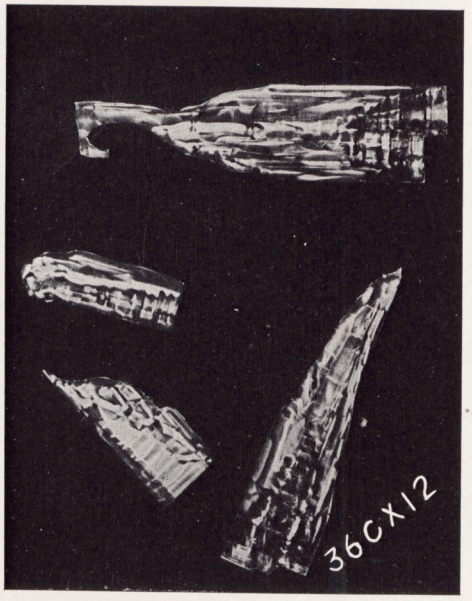
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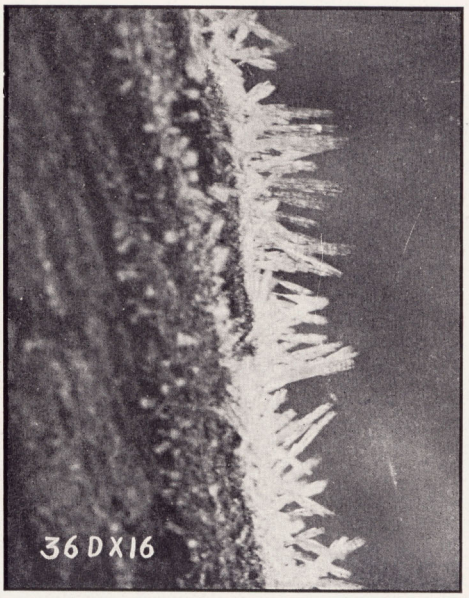
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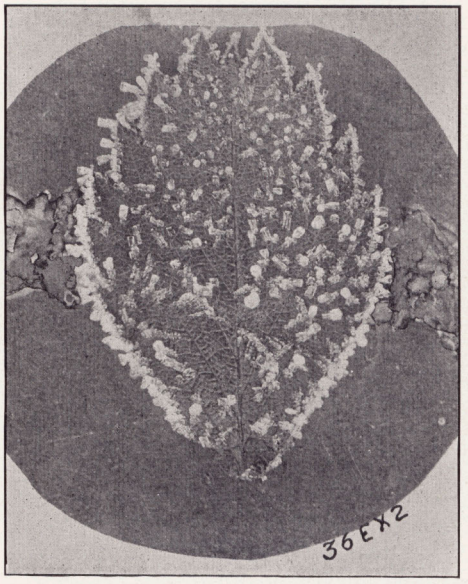
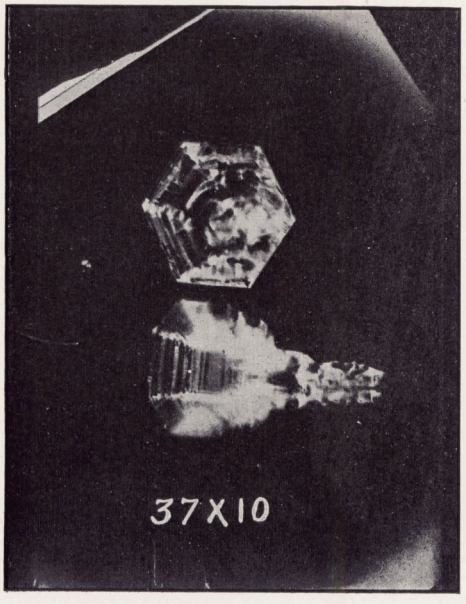

36EX2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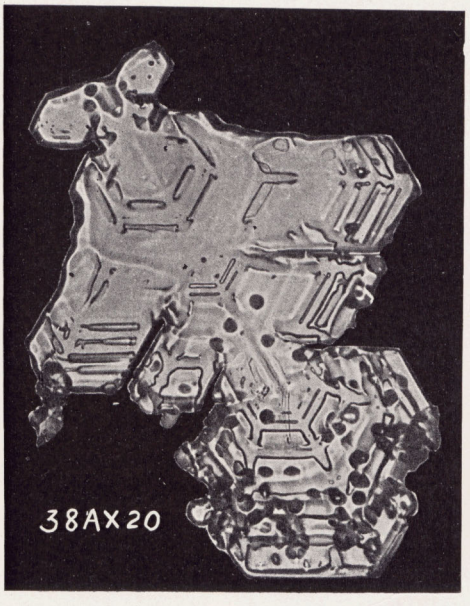
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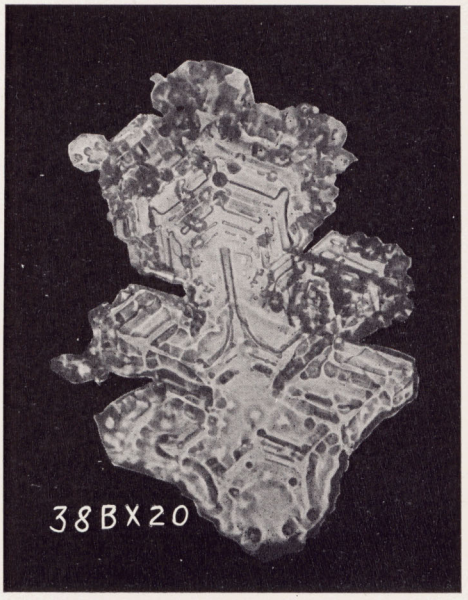
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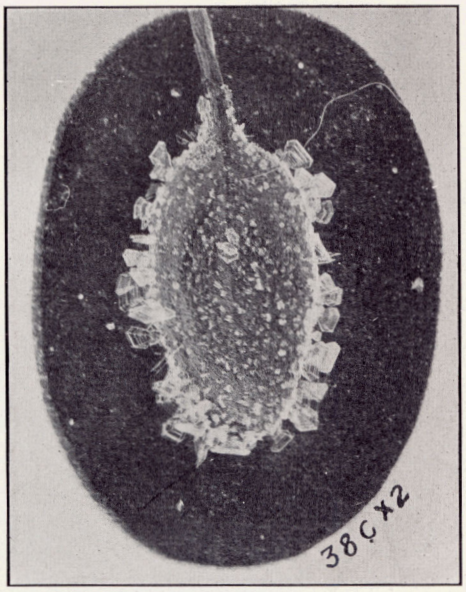
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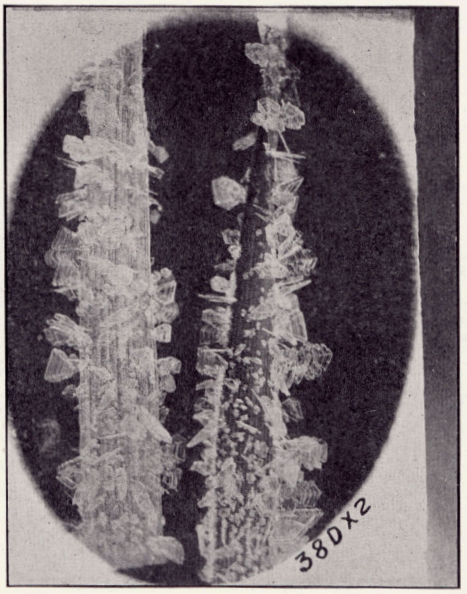
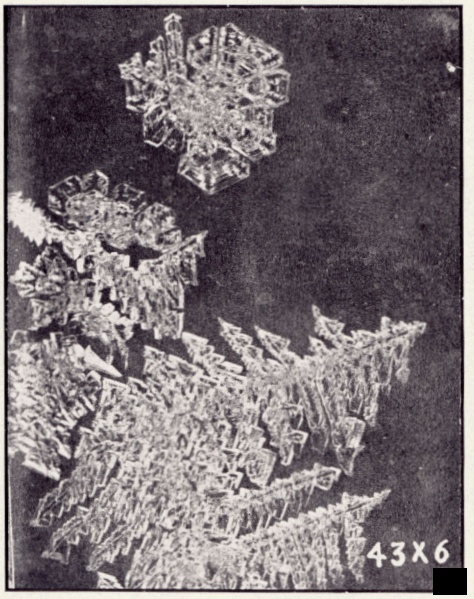

38D X2


42X6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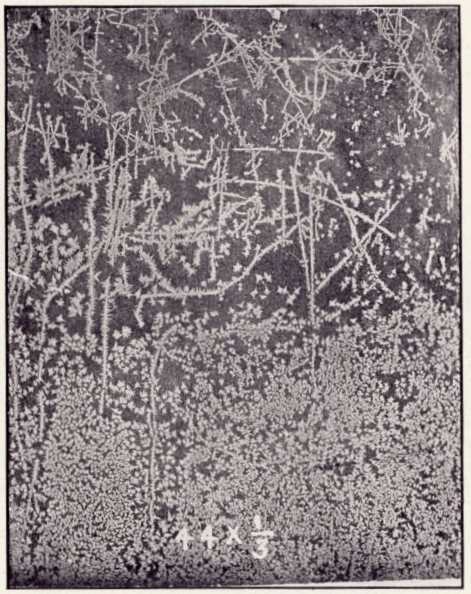
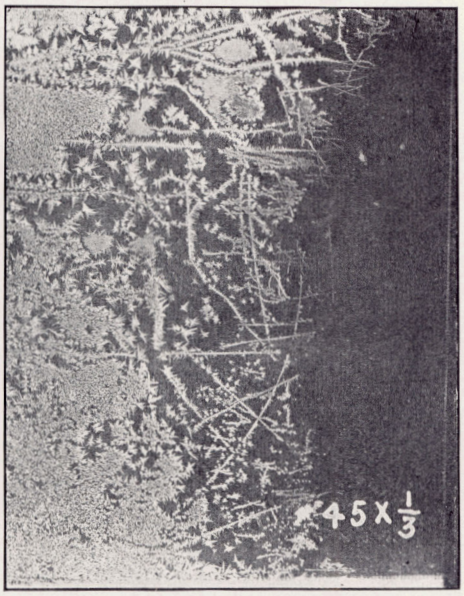

44X 1/3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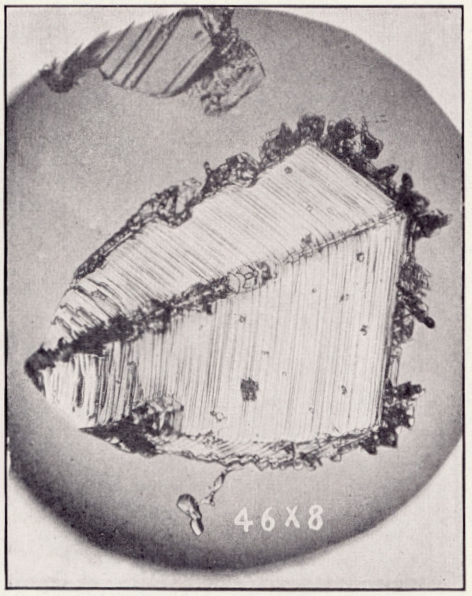
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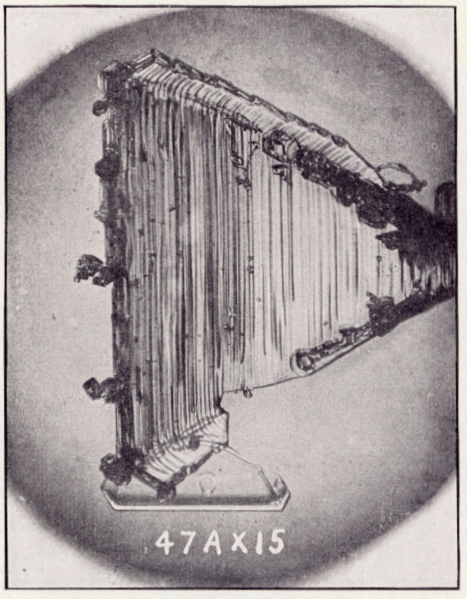
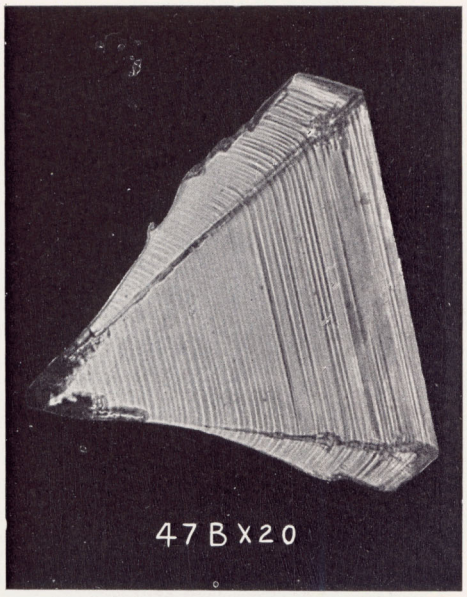
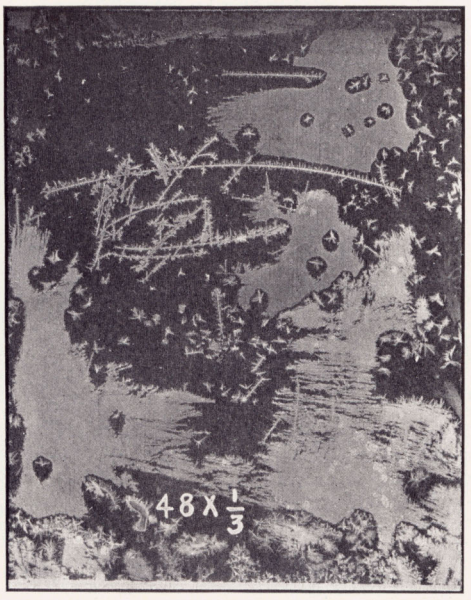
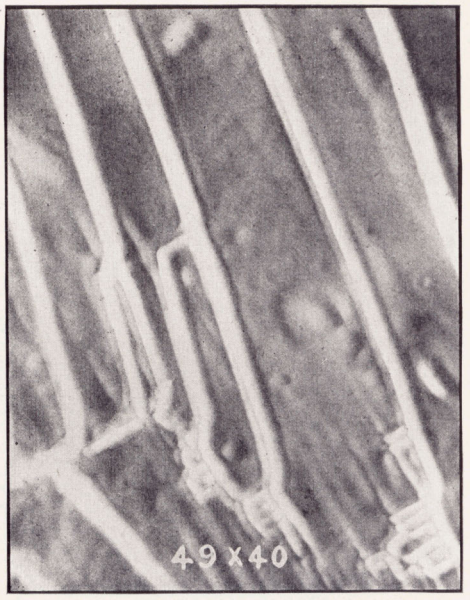
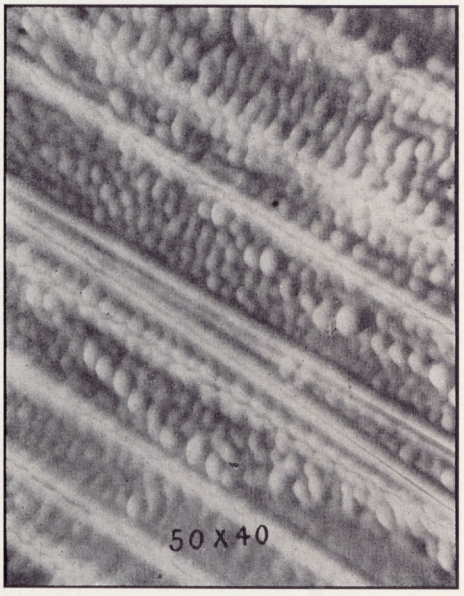

47AX15

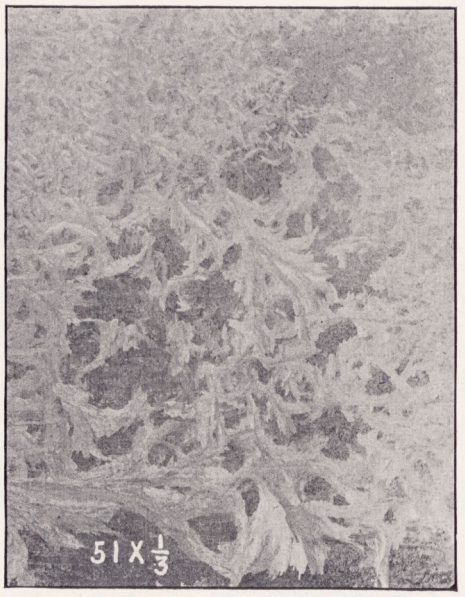
Photomicrographs of Frost and Ice Crystals.

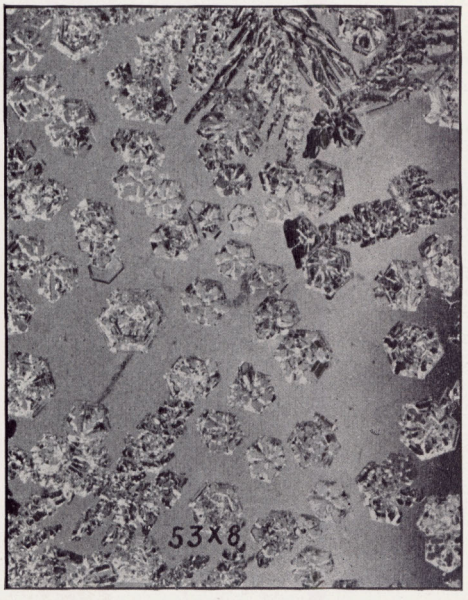


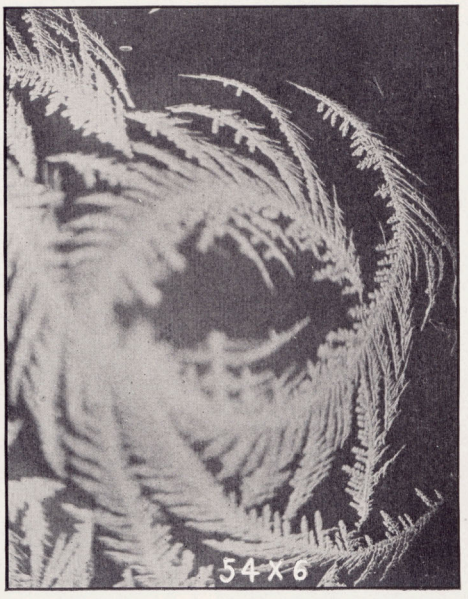




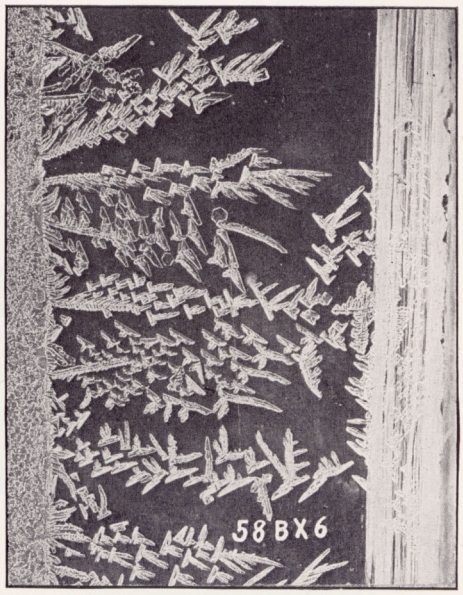


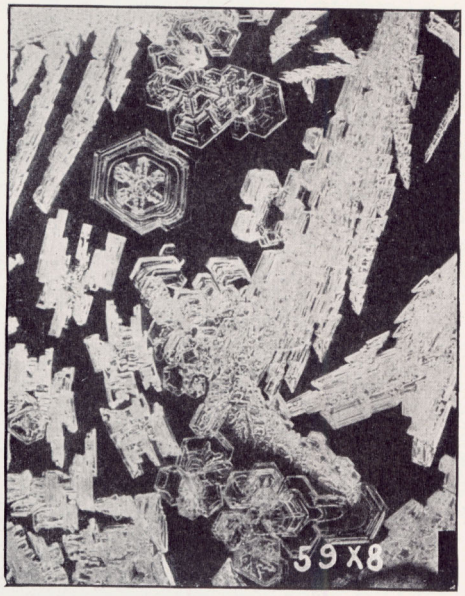


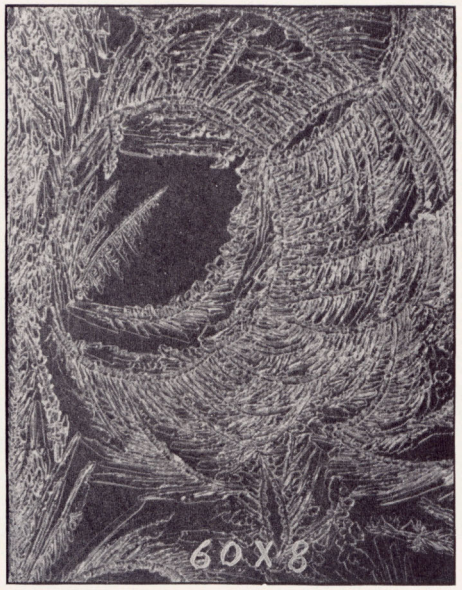


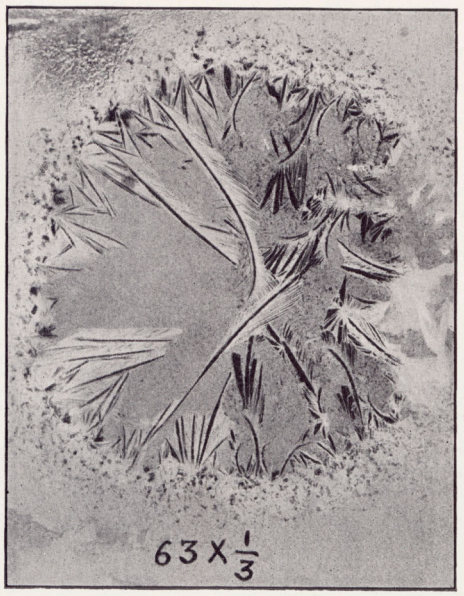


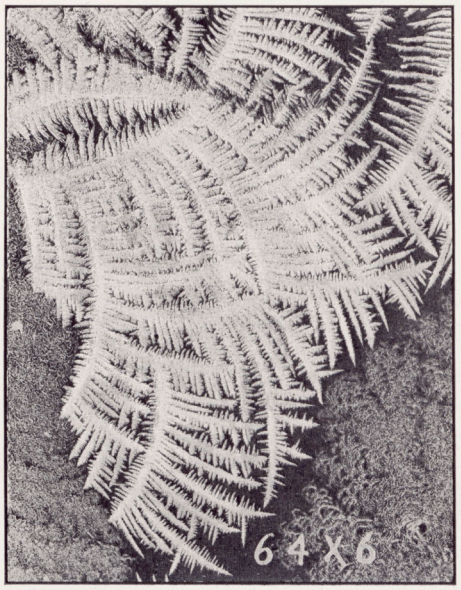
Photomicrographs of Frost and Ice Crystals.



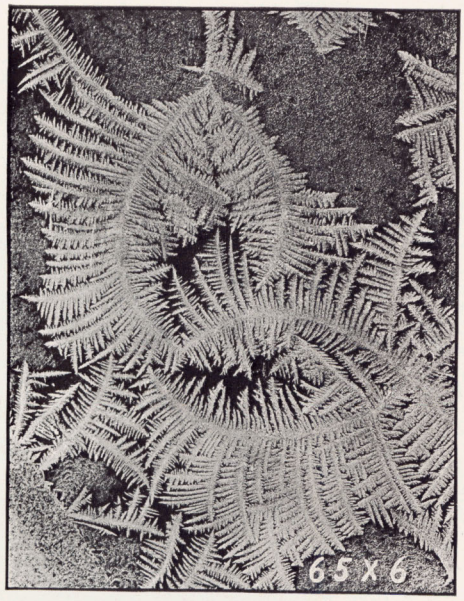


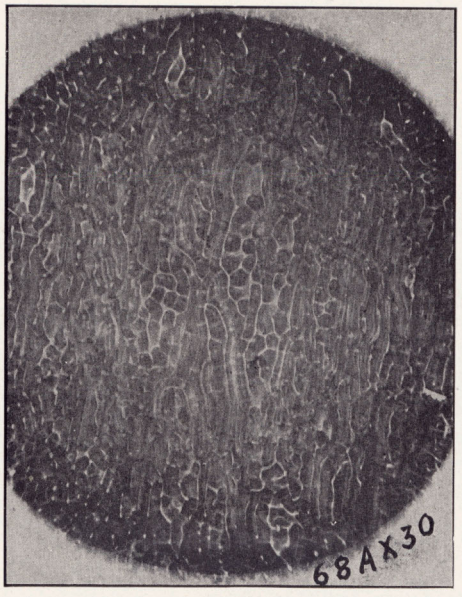


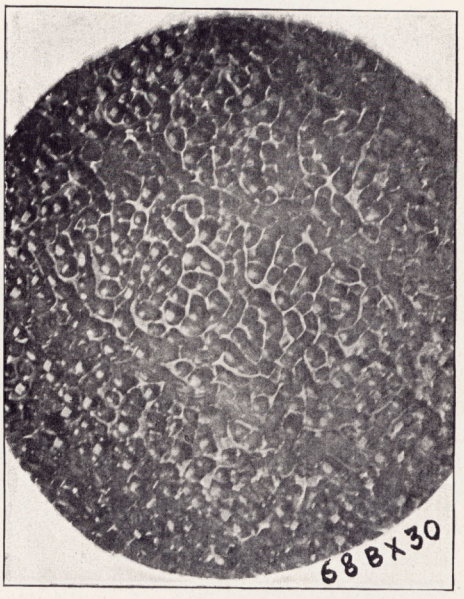


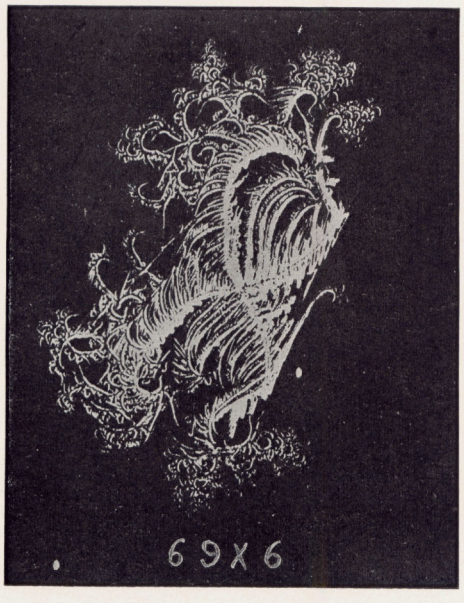


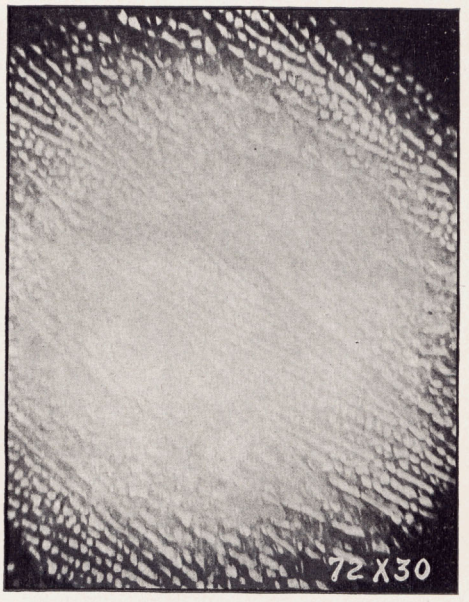
Photomicrographs of Frost and Ice Crystals.

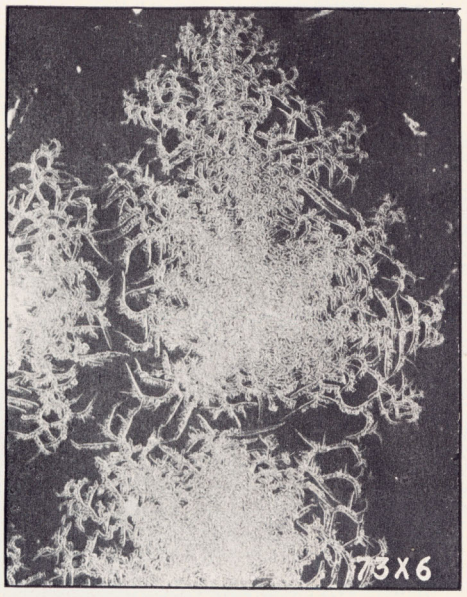








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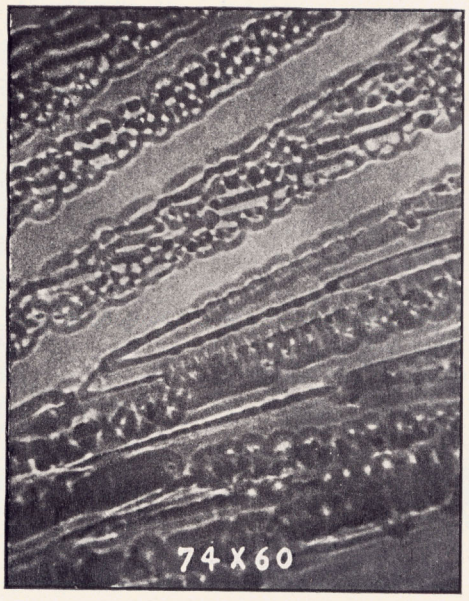
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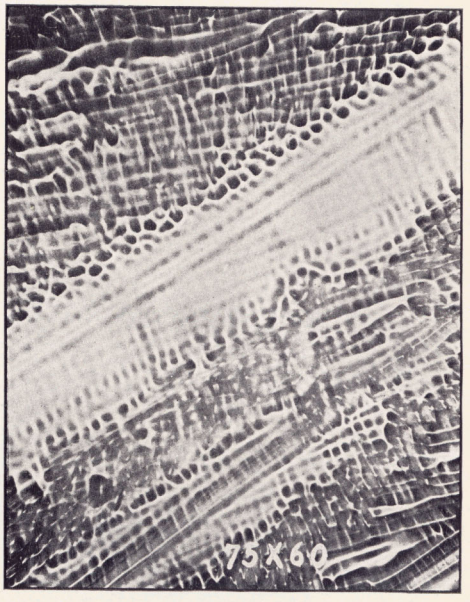
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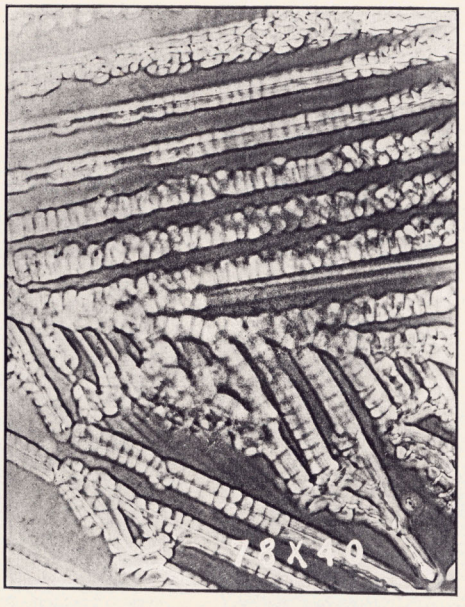
77X6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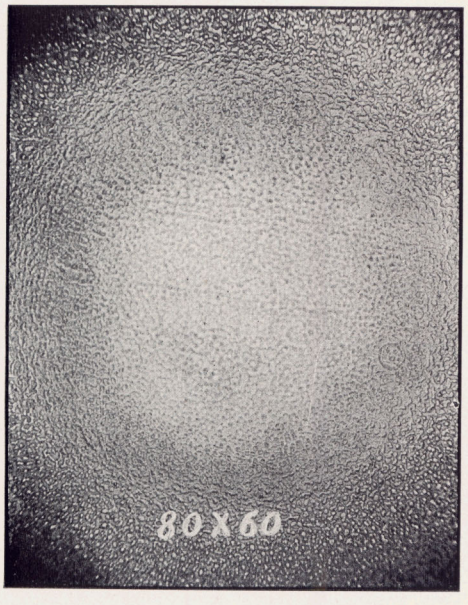
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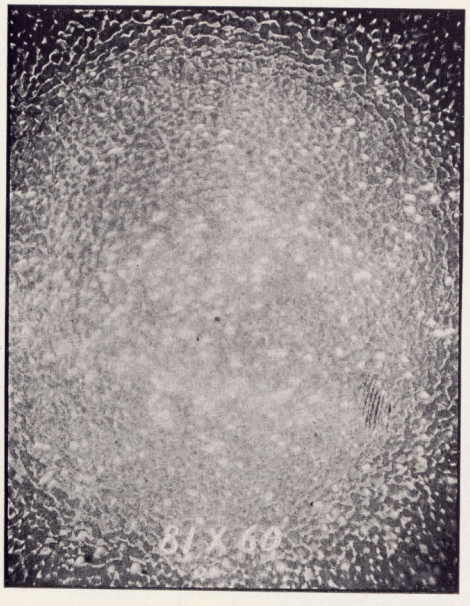
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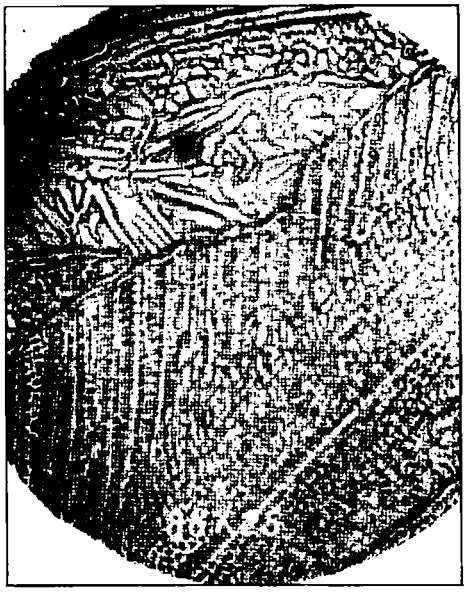
82X35

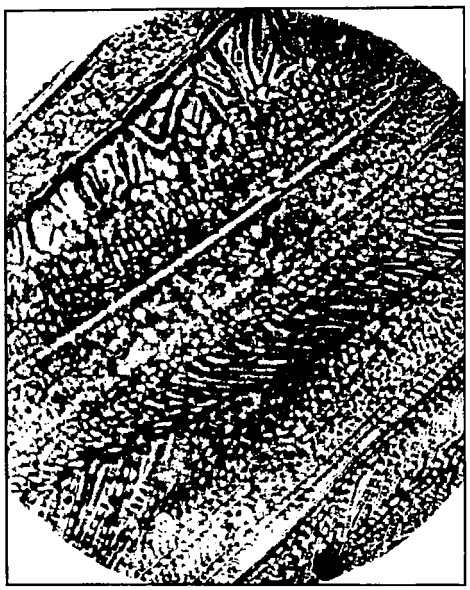

83X30

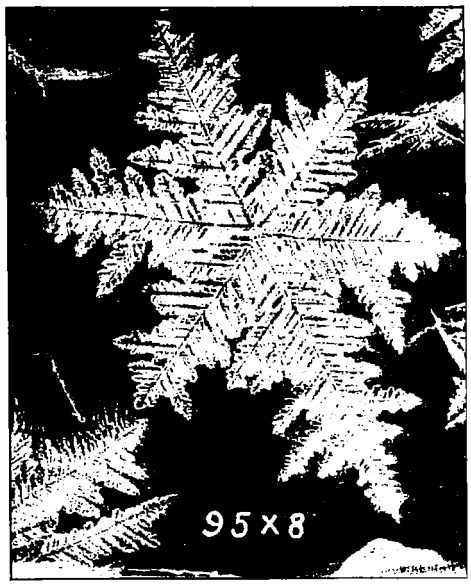

85X8


87X20




92 X 25

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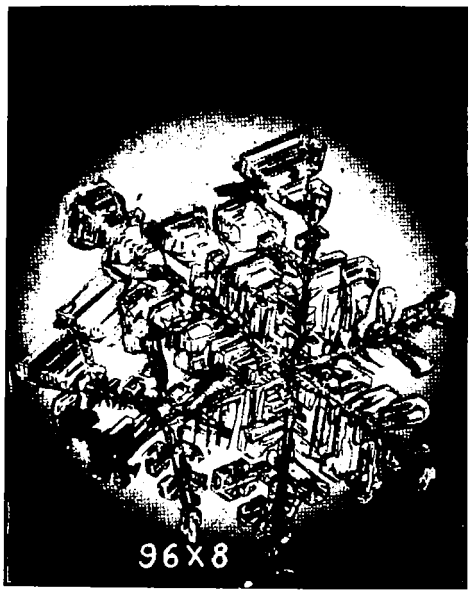
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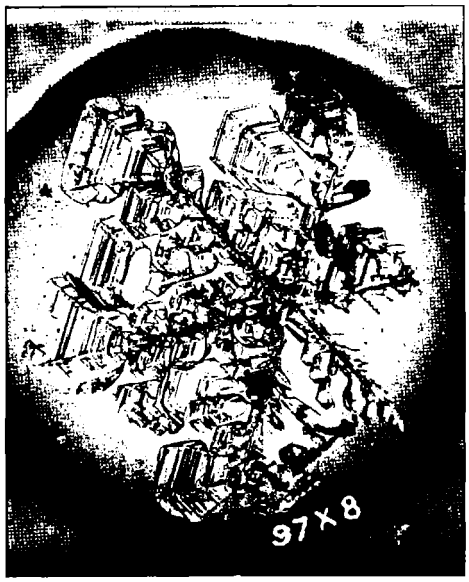
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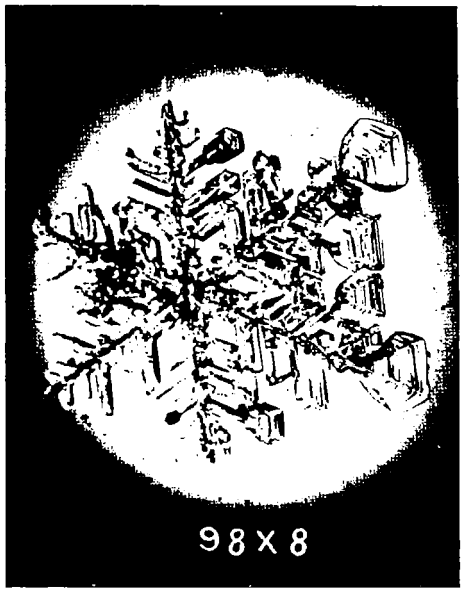
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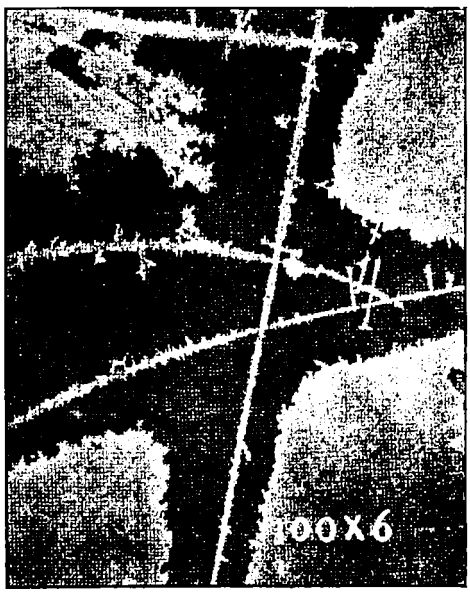
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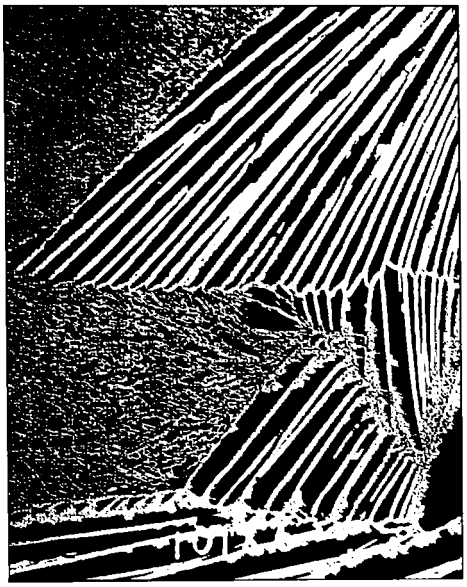


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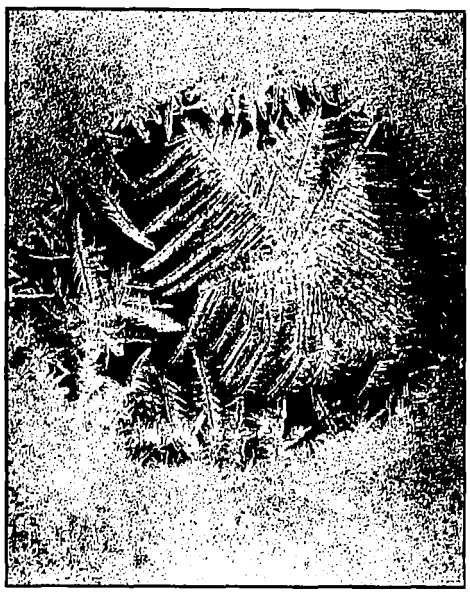


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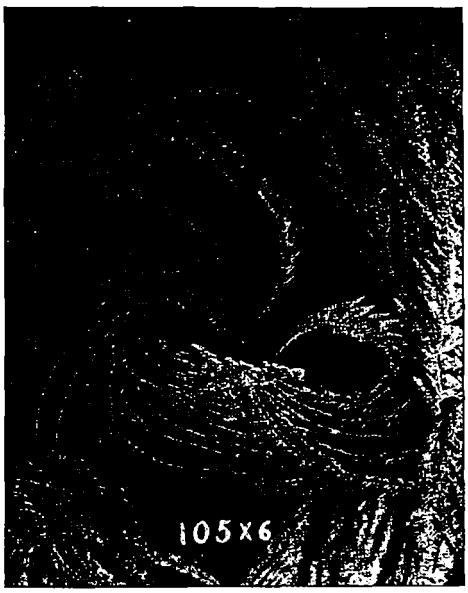
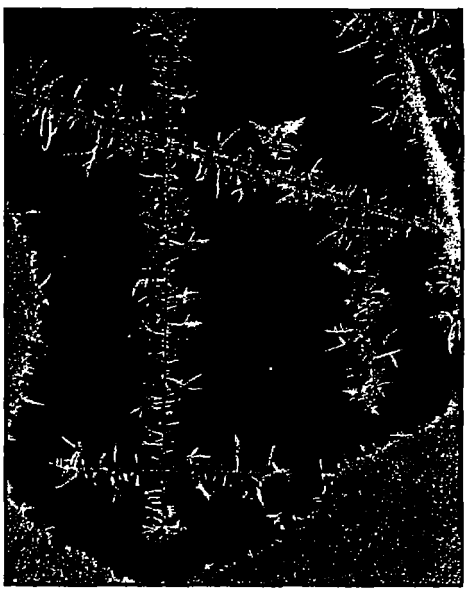
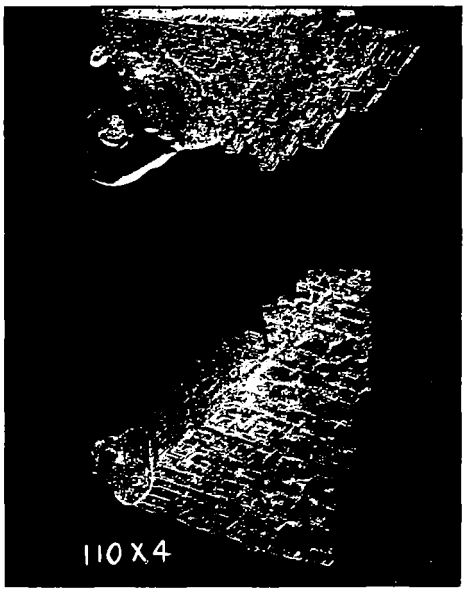
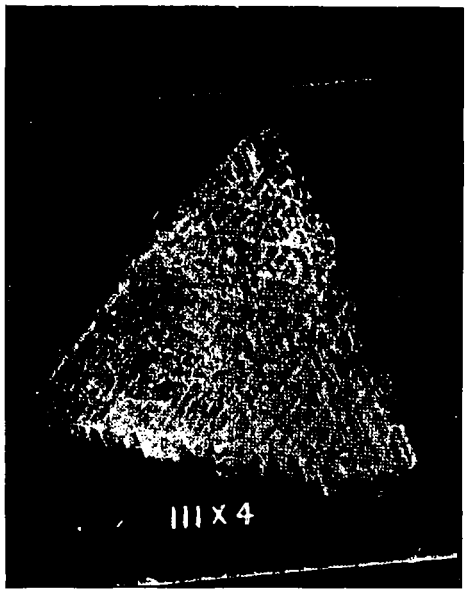

105X6

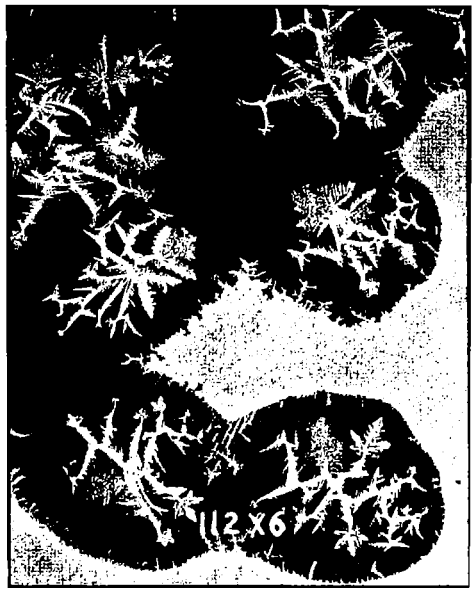

107X6



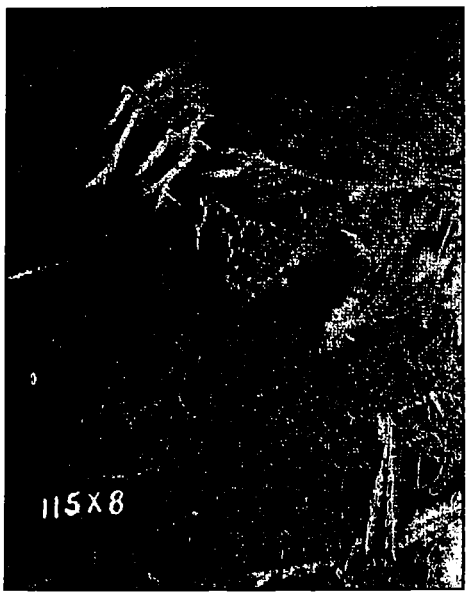

109X6

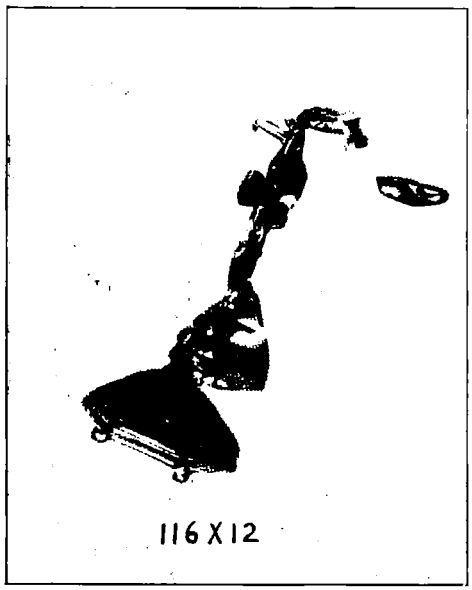

110X4


111 X 4

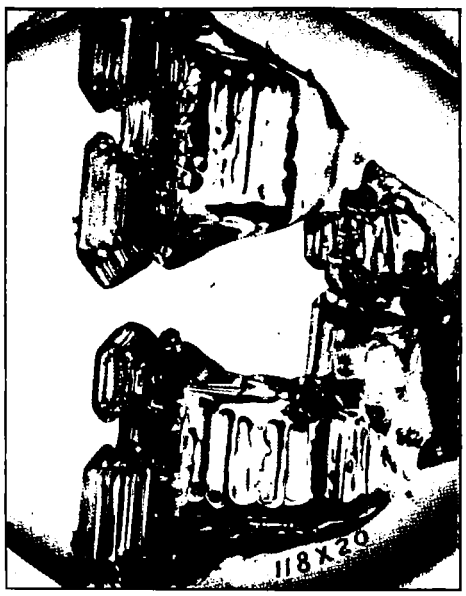

112 X 6


113 X 4


115 X 8


116 X 12

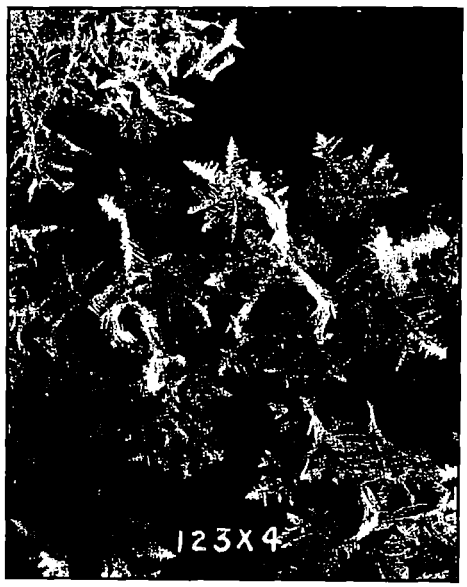

117 X 6


118 X 30


119A X 8

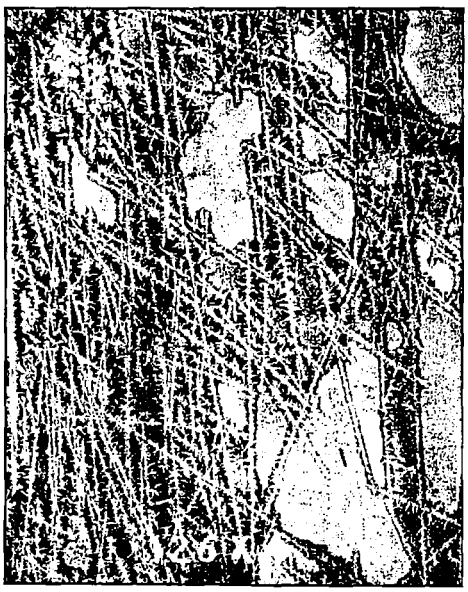

119 B X 6


120 X 6


123 X 4

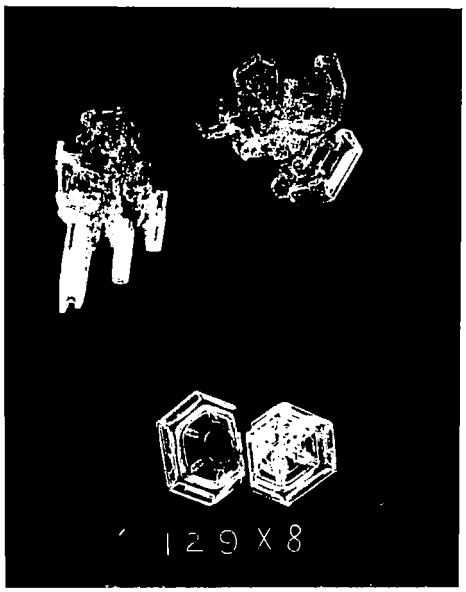

124 X 6

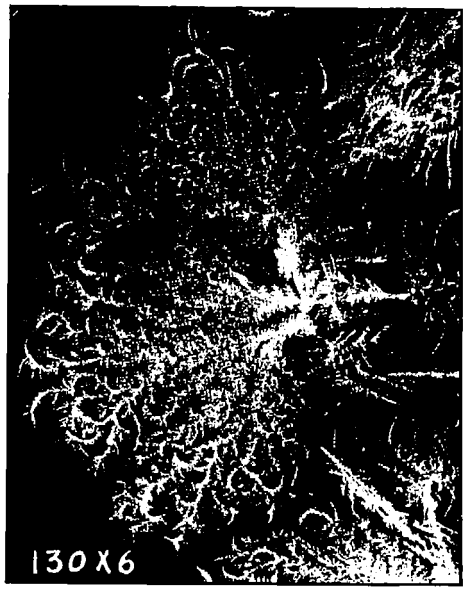

125 X 6




127 X 8


128 X 6


129X8

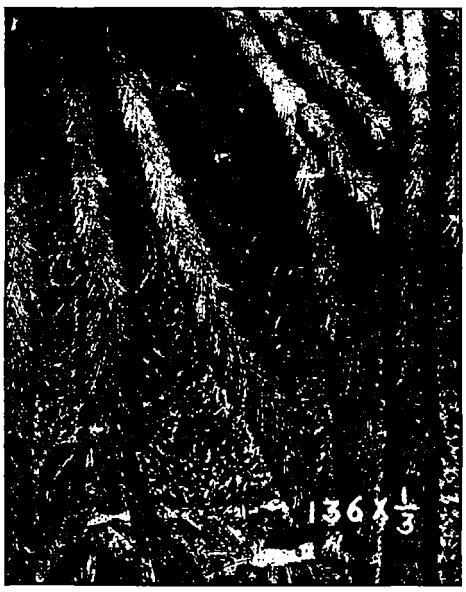

130X6


131X6

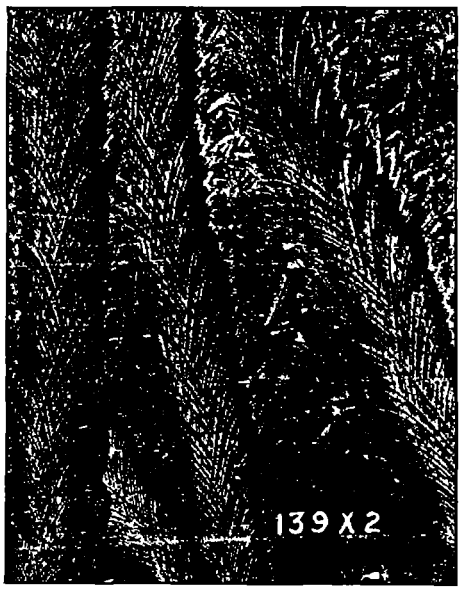

132X6


133X15


135X15

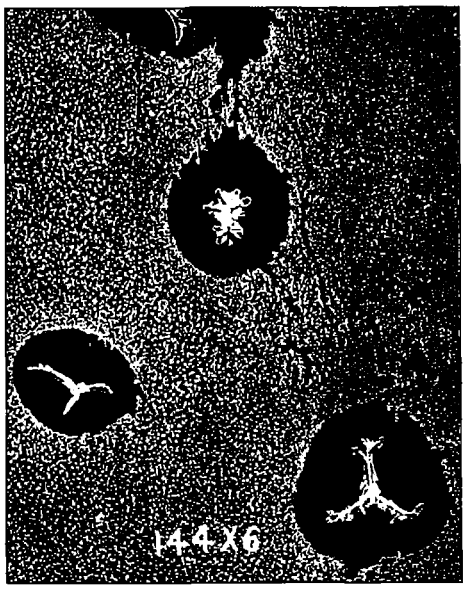

136X1/3

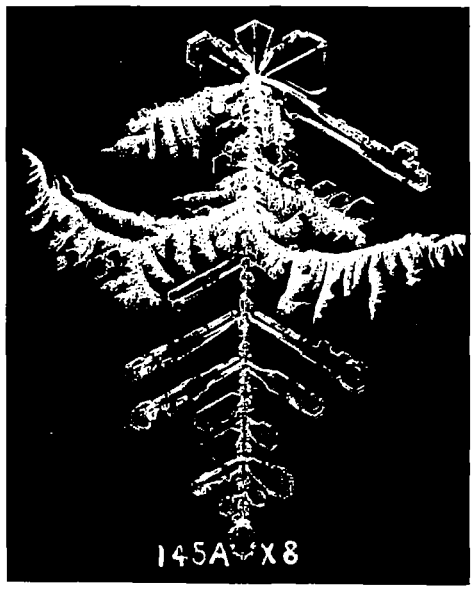

138X1/3


139 X 2

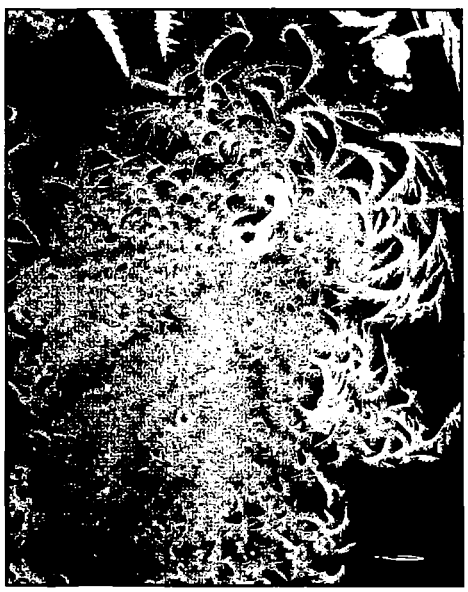

42


143X4

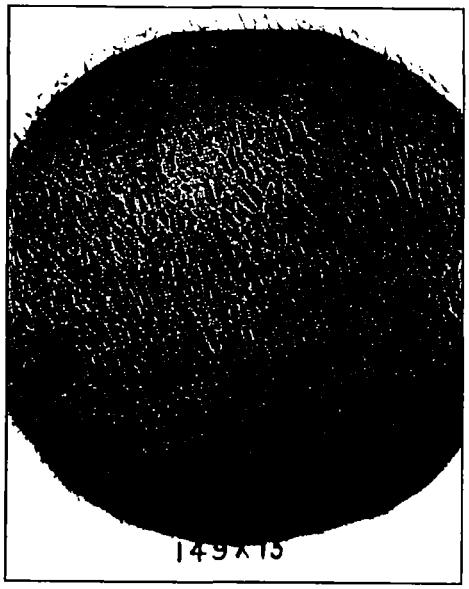

144X6


145A X8

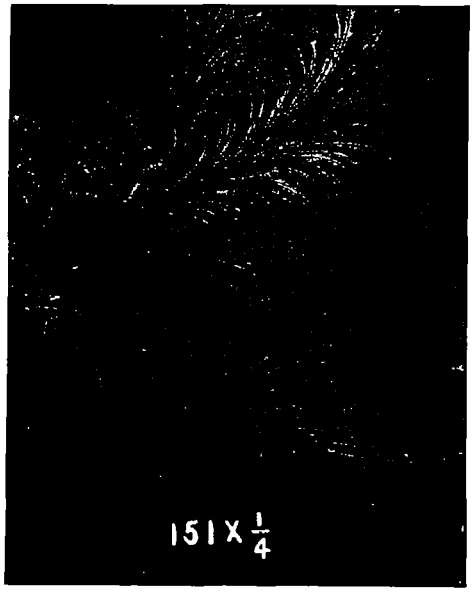

146X6

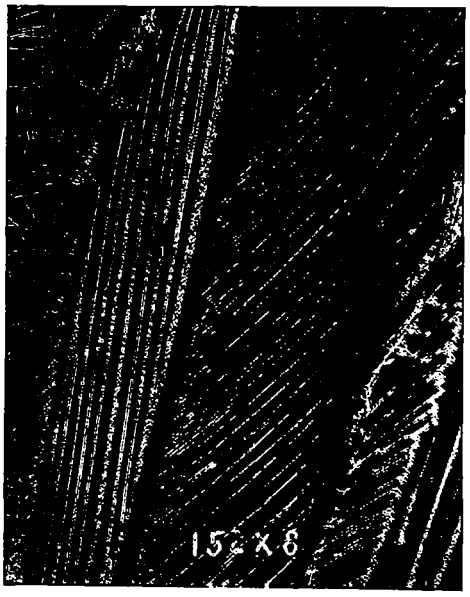


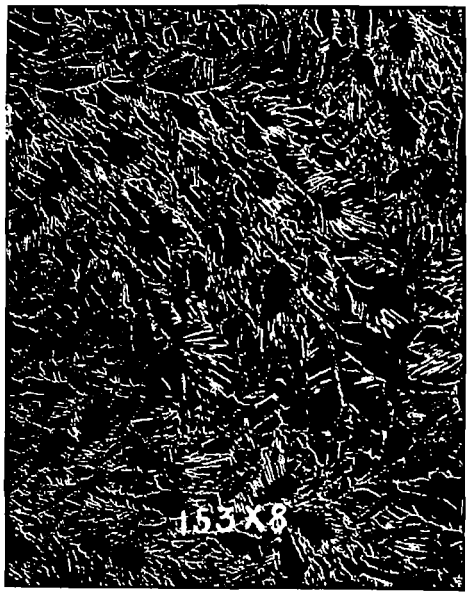

148X8


149X15


150X1/2

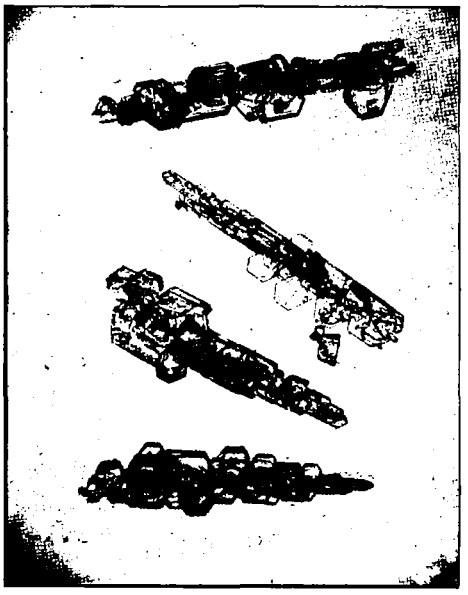

151X1/4

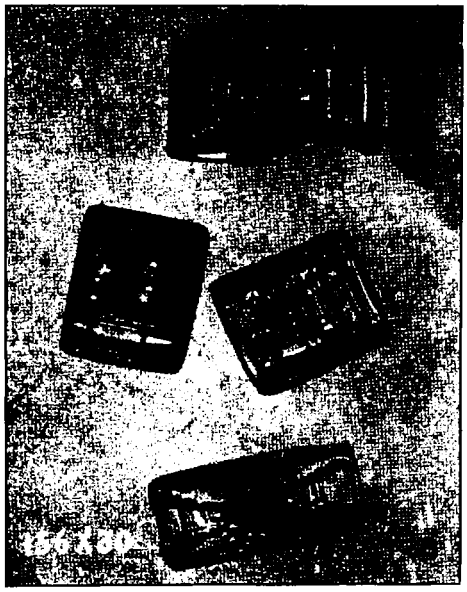

152X8

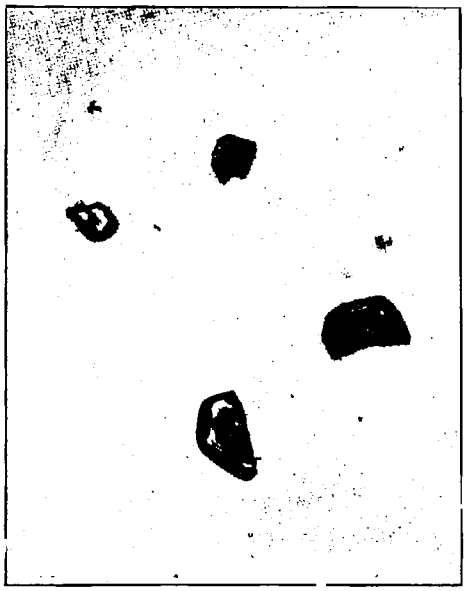

153X8

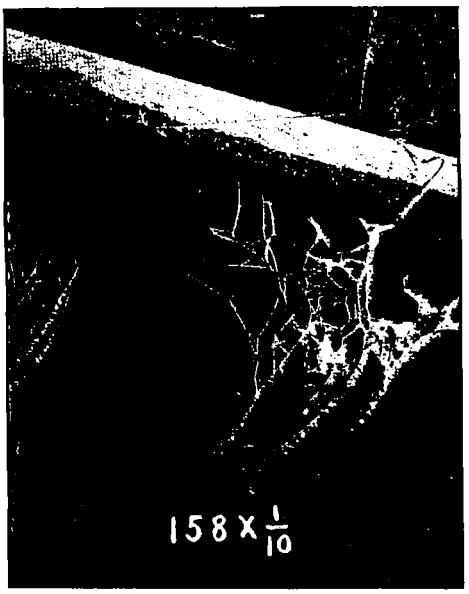

154AX8


154BX8



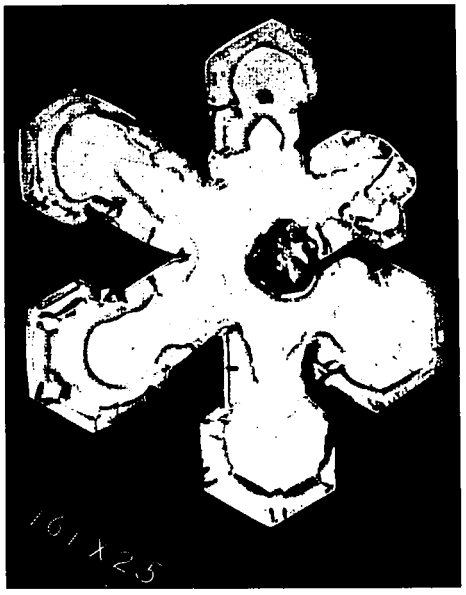


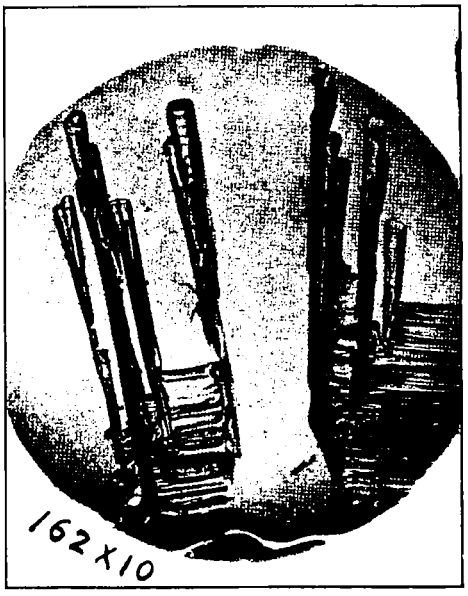


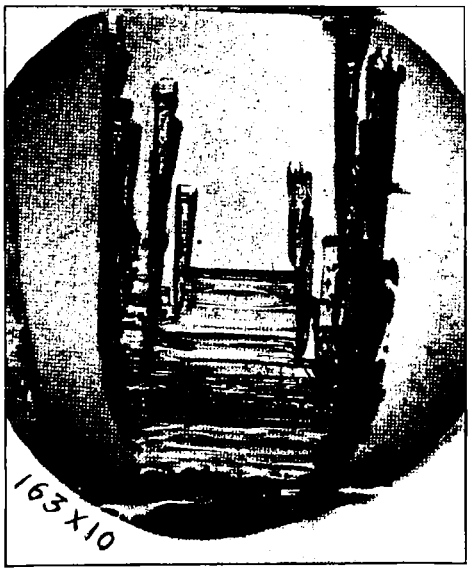

158 X 1/10


159 X 2


160 X 1/10


161 X 2.5


162 X 10

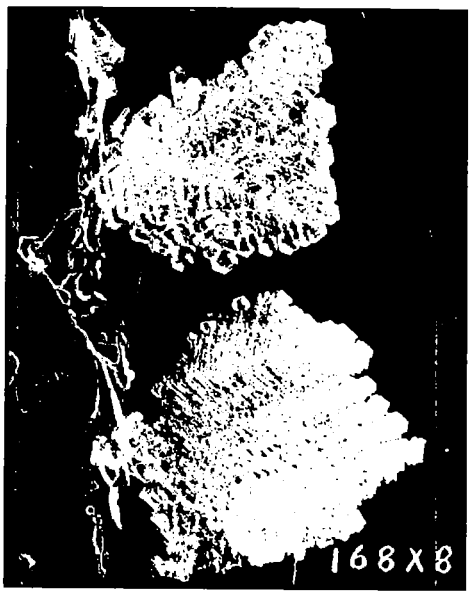

163 X 10


164 X 8


165 X 2

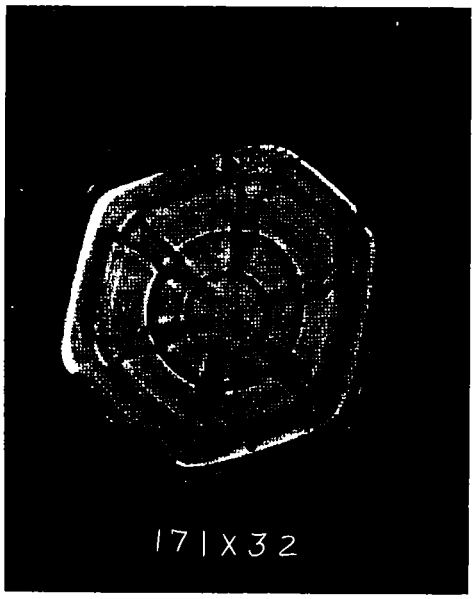

166 X 6

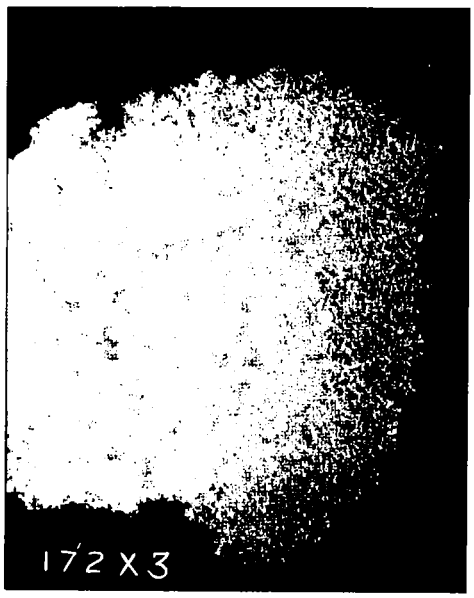

167X4


168X8


169X8


170 X 1/10


171X32


172X3


173X3


174 X 3

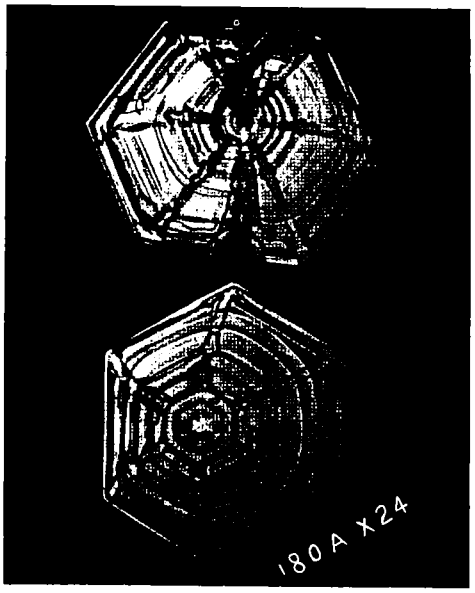

175 X 3


176


177 X 1/3


178 X 3


179 X


180 A X 24

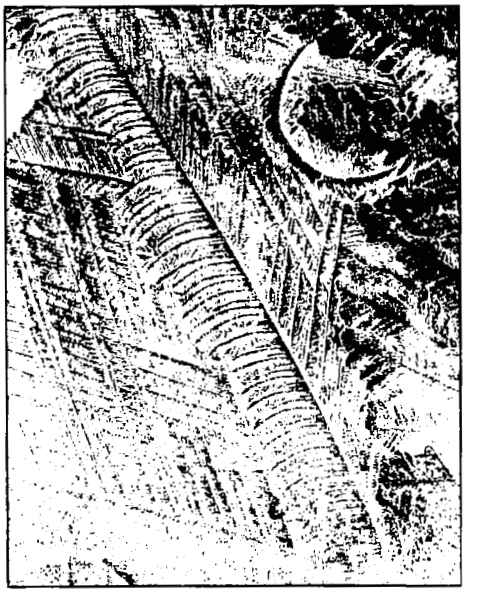

180 B X 4

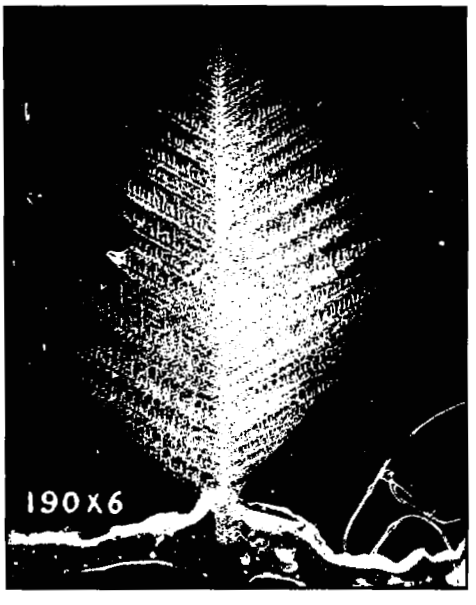

182 X


183 X 1/4


185 X 1

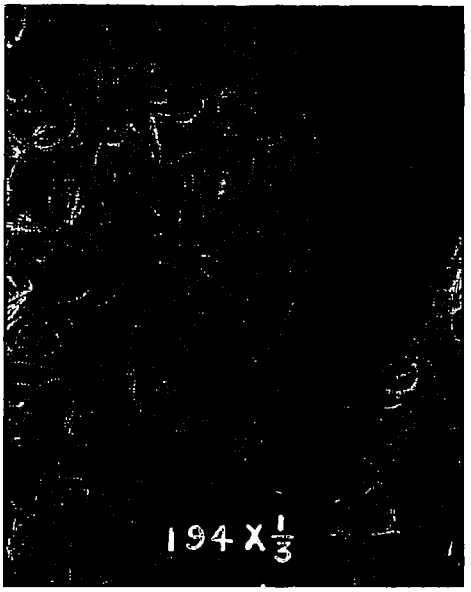

188 X 3

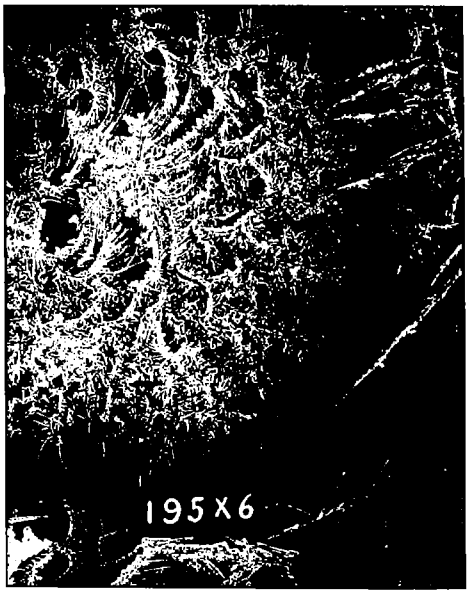



190 X 6


191 X 6

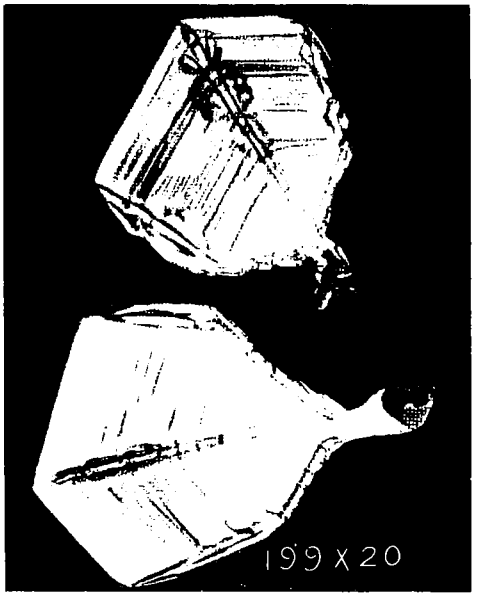

193X1

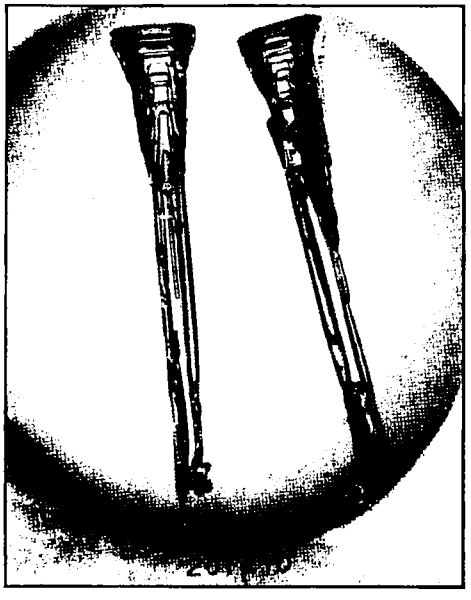

194X1/3


195X6


196AX6

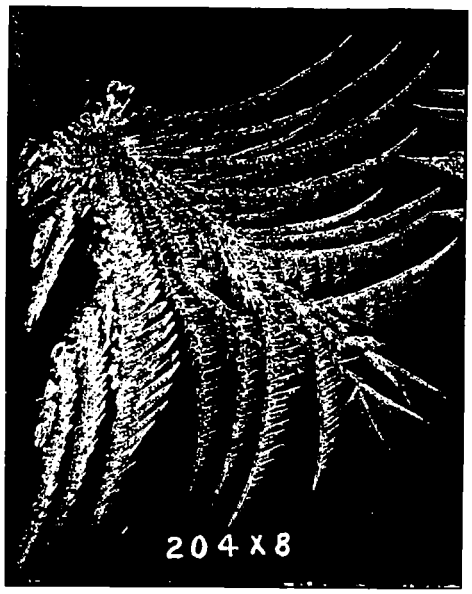

196BX6

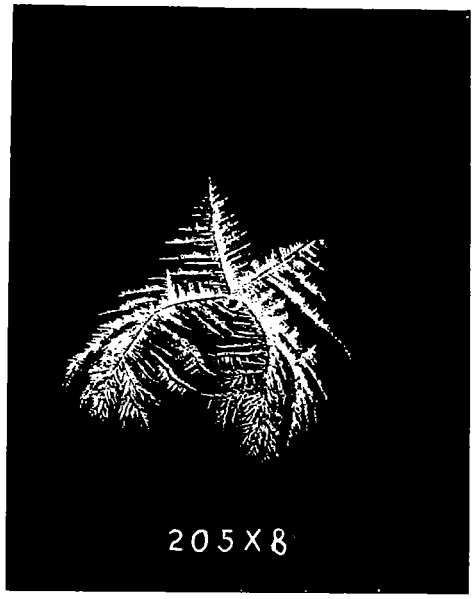

199X20




202X2


203X1

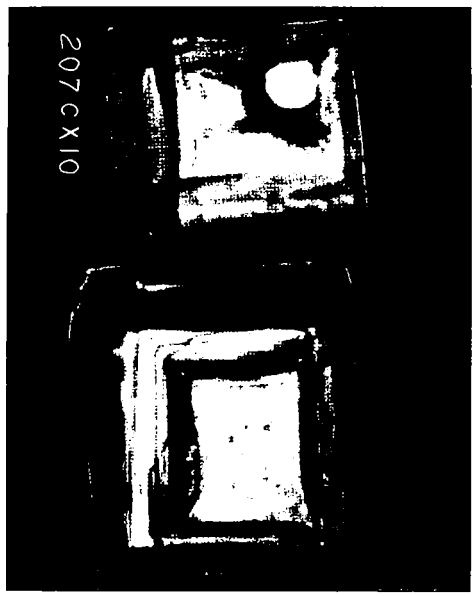

204 X 8


205 X 8

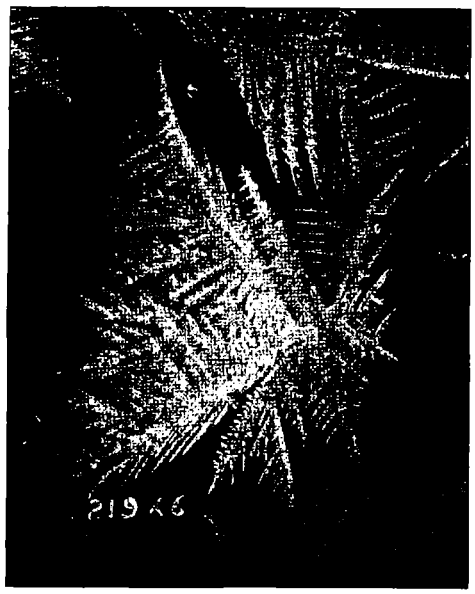

206 X 15

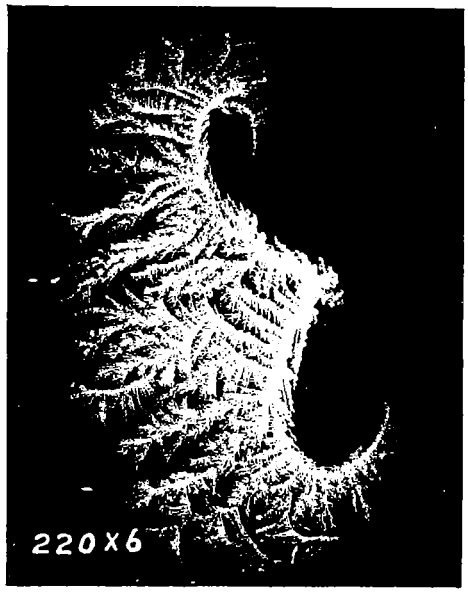

207A x 15


207B X 6


207C X 10

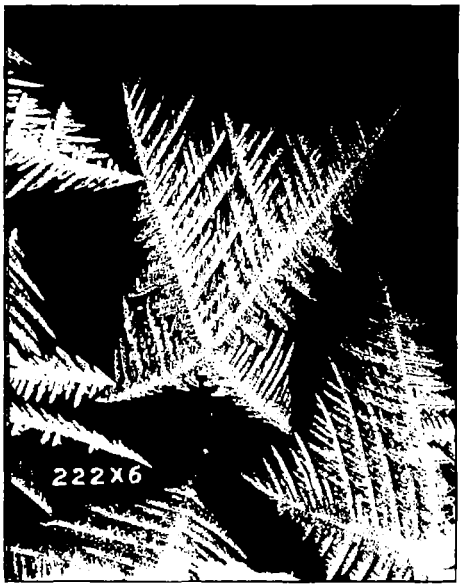

208 X 15

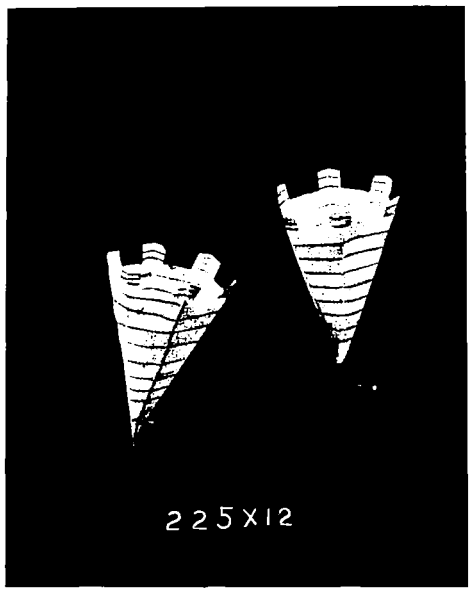

219 X 6

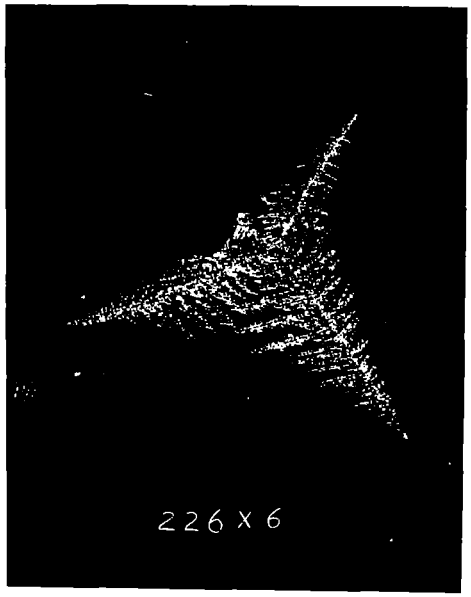

220 X 6

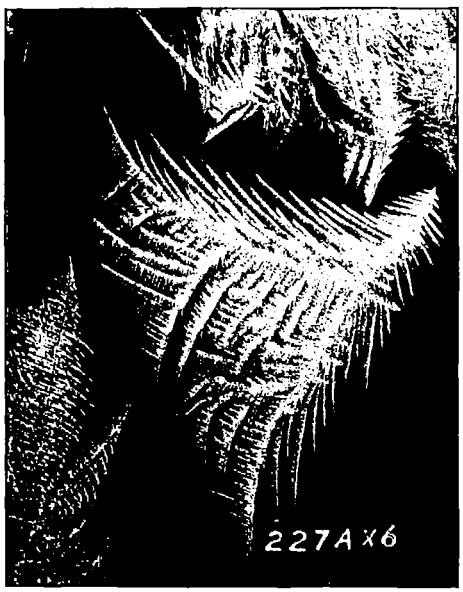
Photomicrographs of Frost and Ice Crystals.

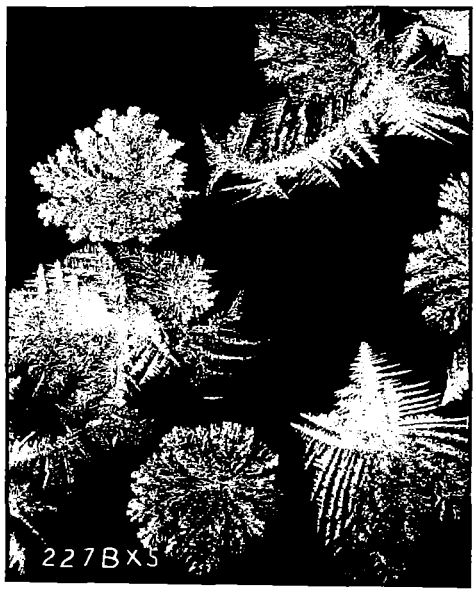
Plate XXV.

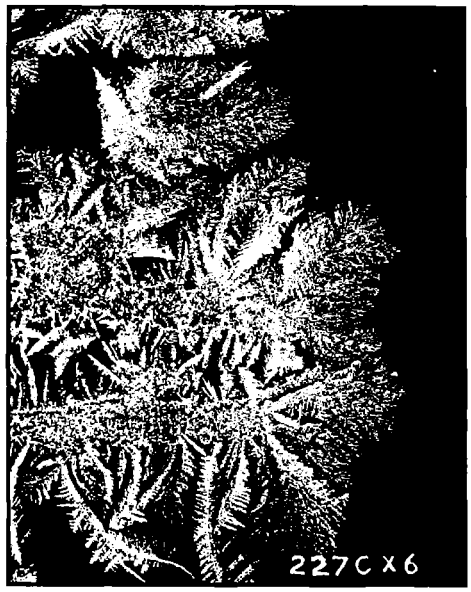


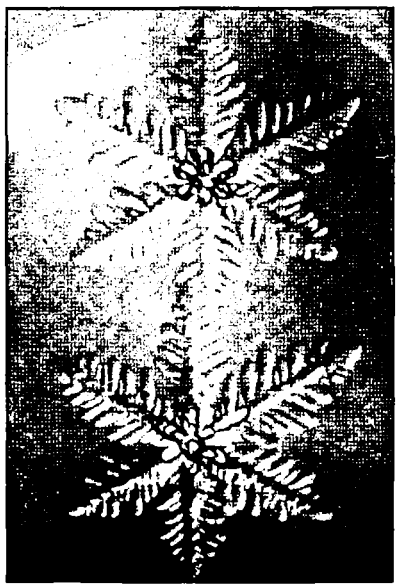


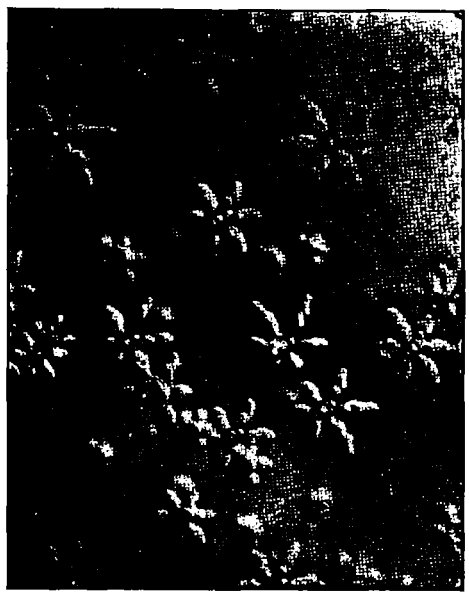


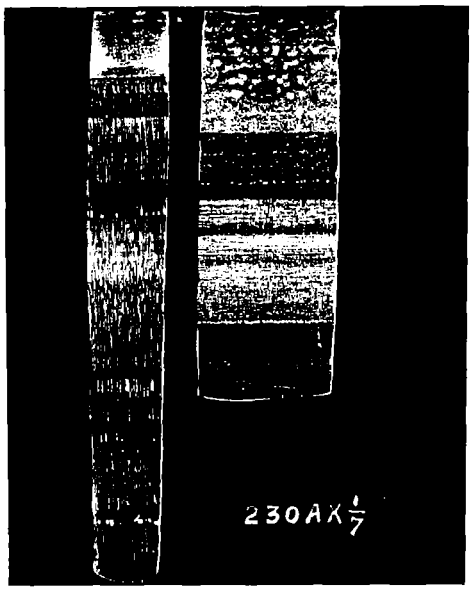




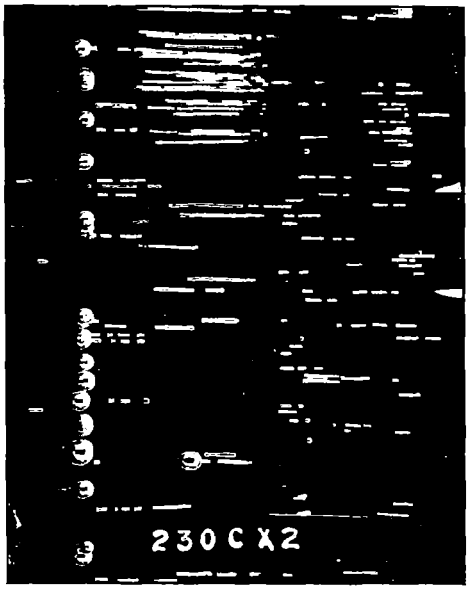


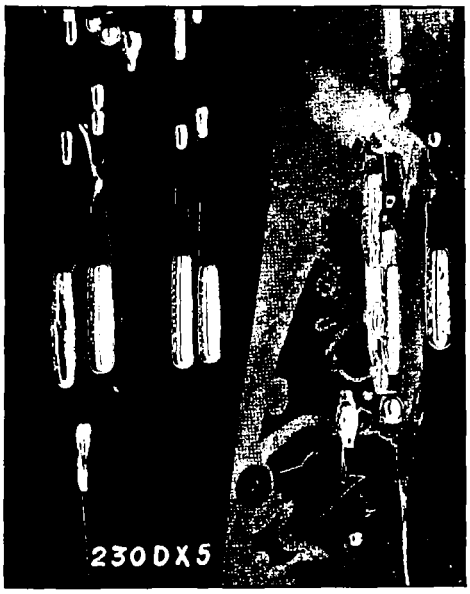


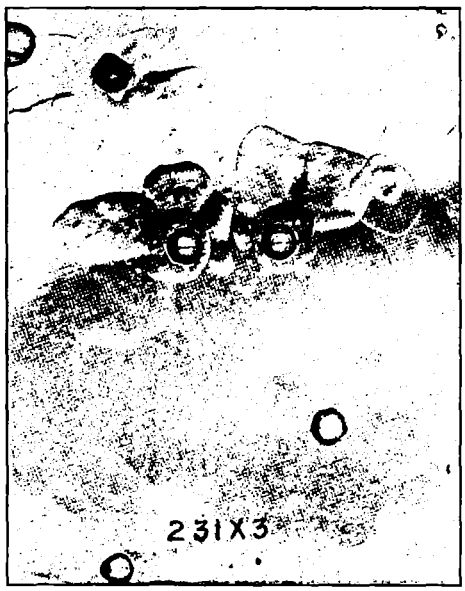


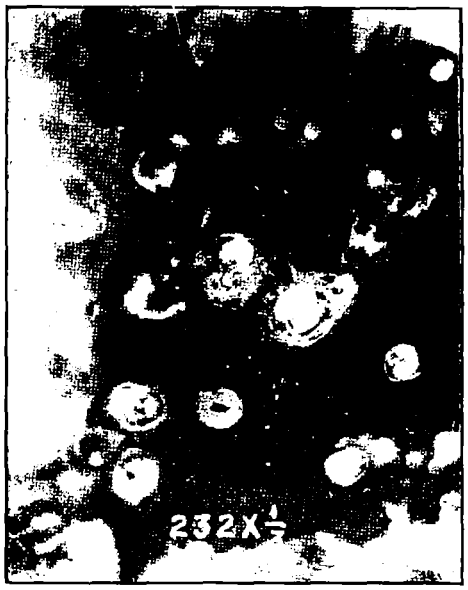

230AX1/7


230BX2

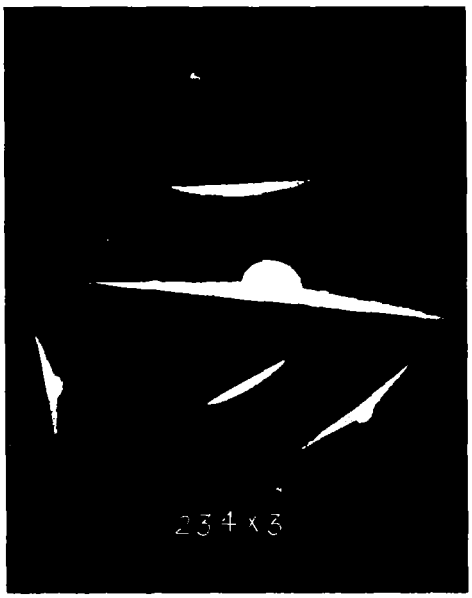

230CX2

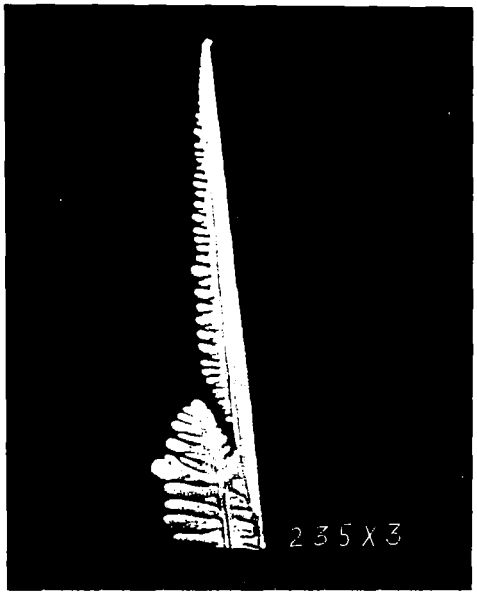

230DX5


231X3

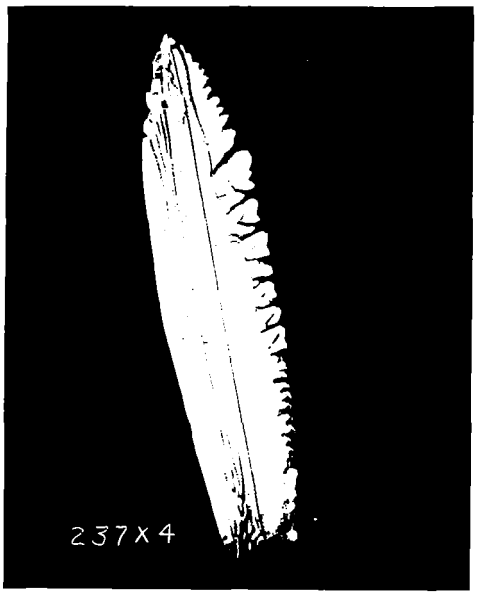

232X1/2

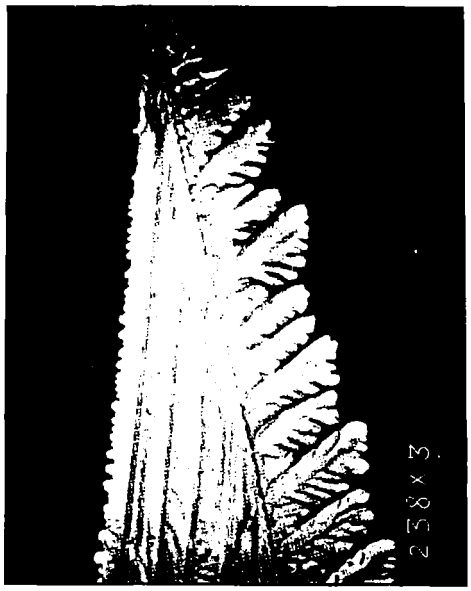

233X3

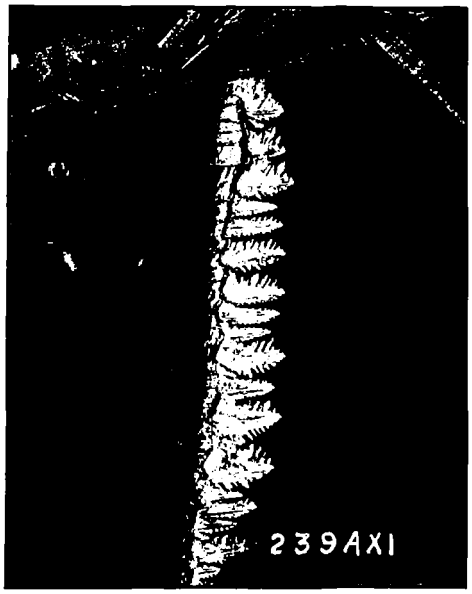

234X3

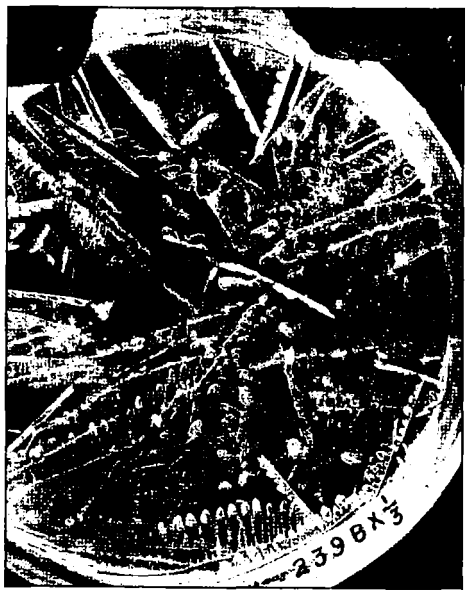

235X3


236X3


237X4


238X3


239AX1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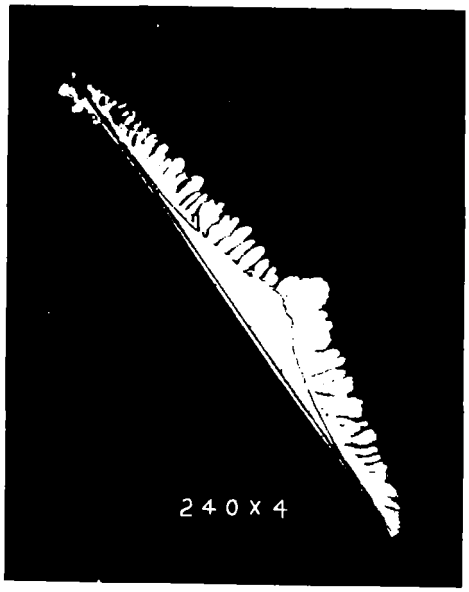
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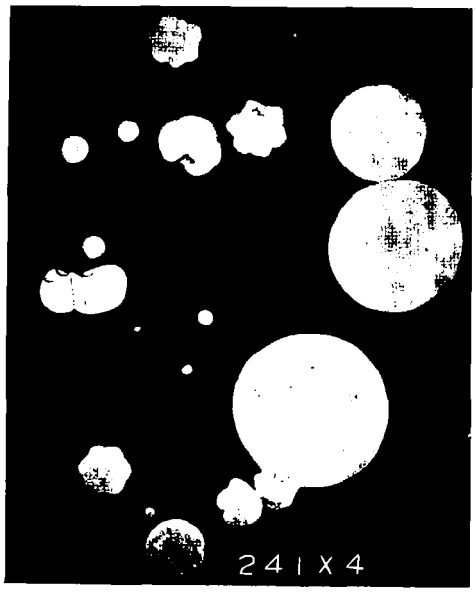
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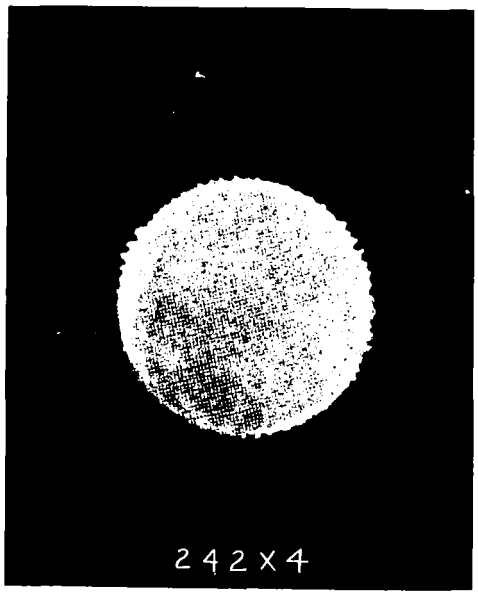
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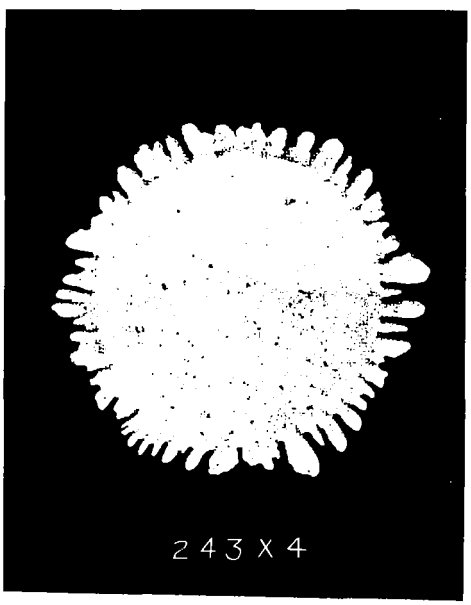
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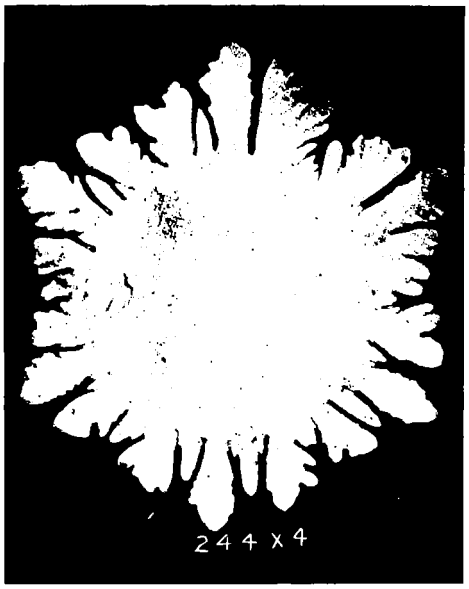
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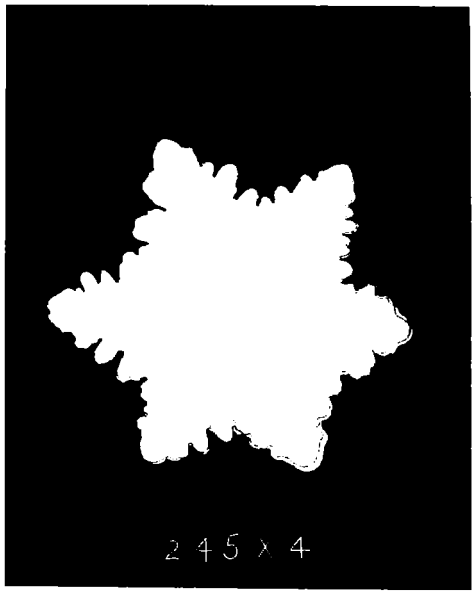
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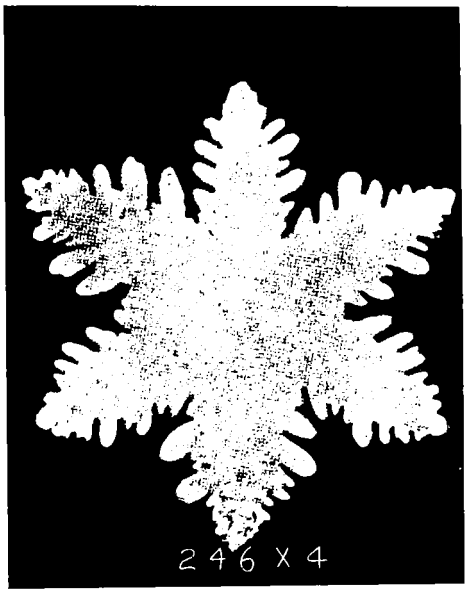
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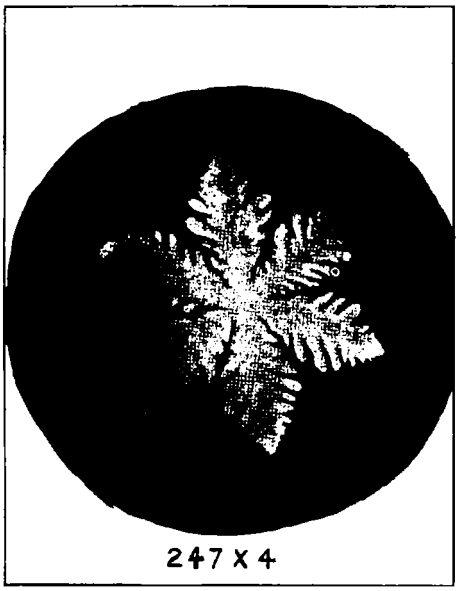
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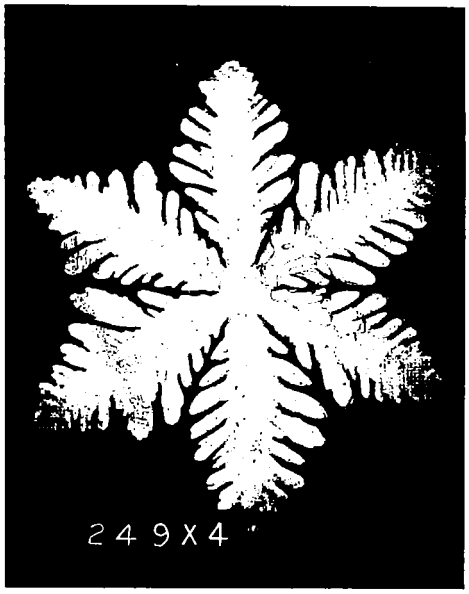
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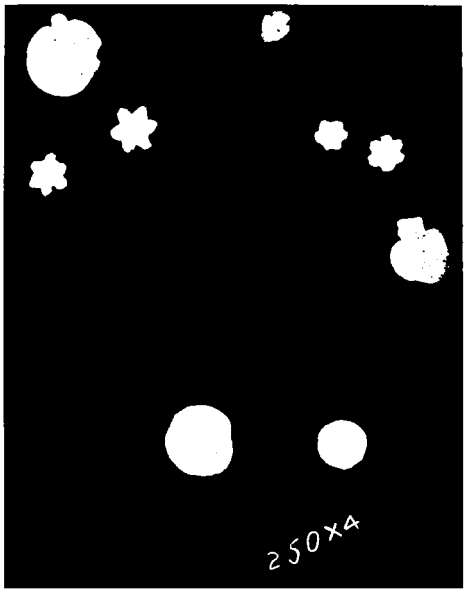
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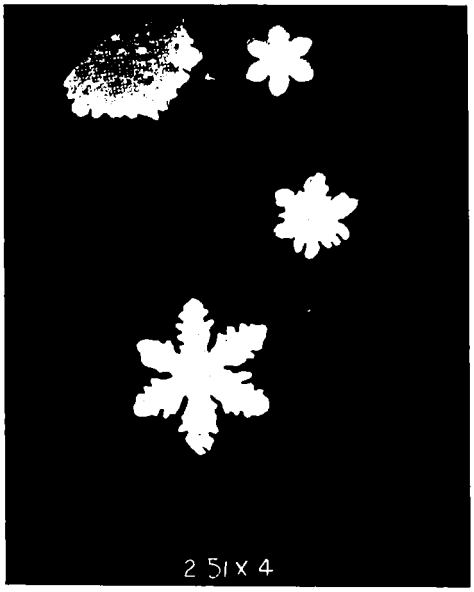
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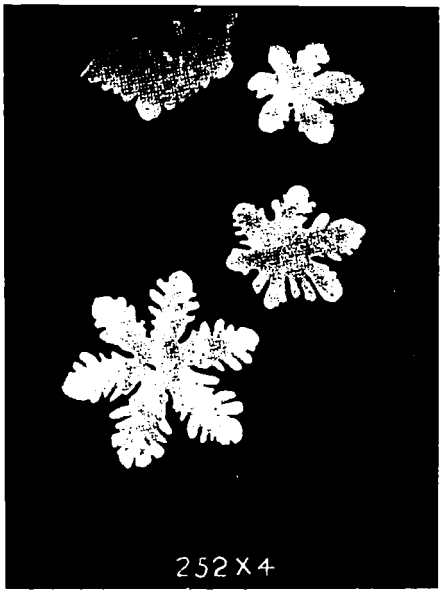
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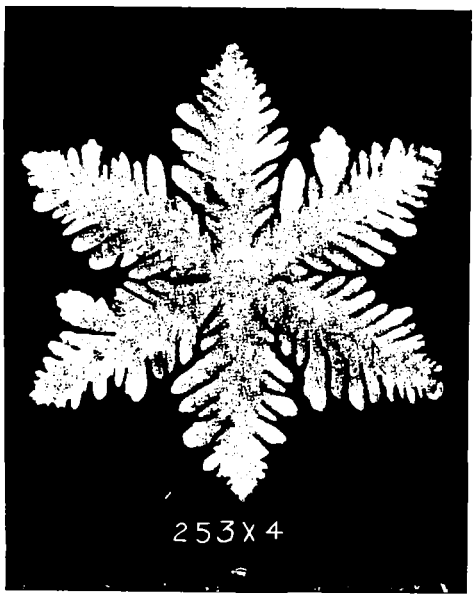
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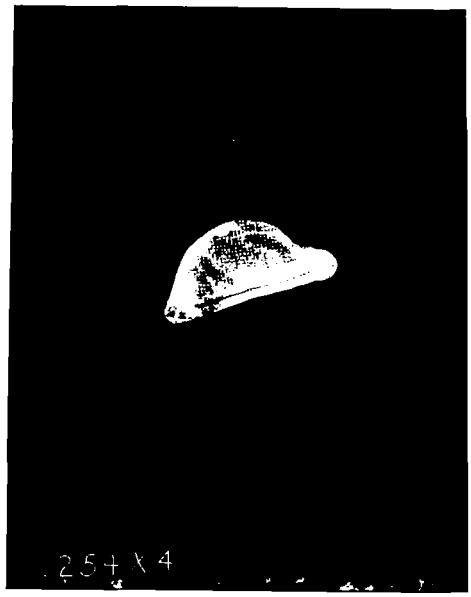
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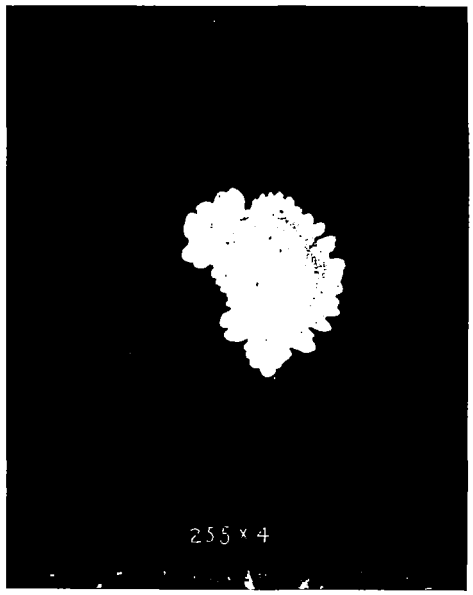
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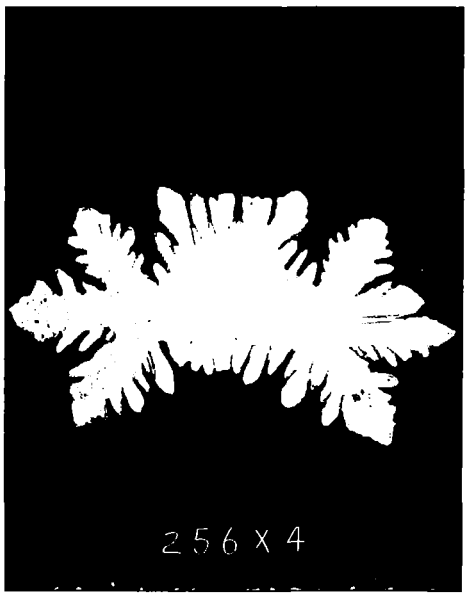
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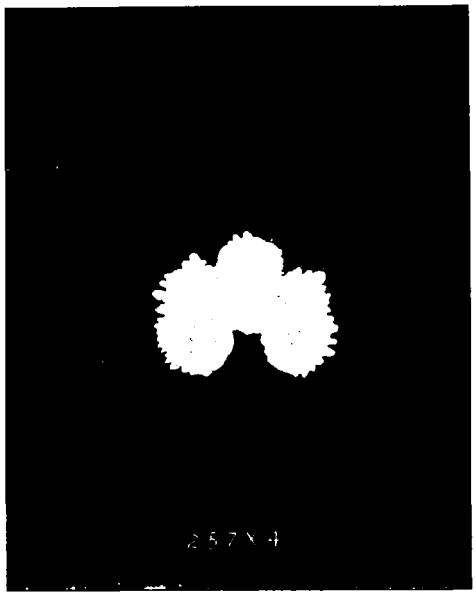
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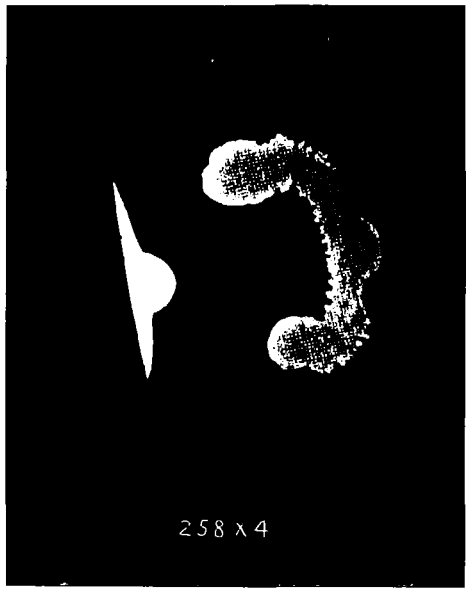
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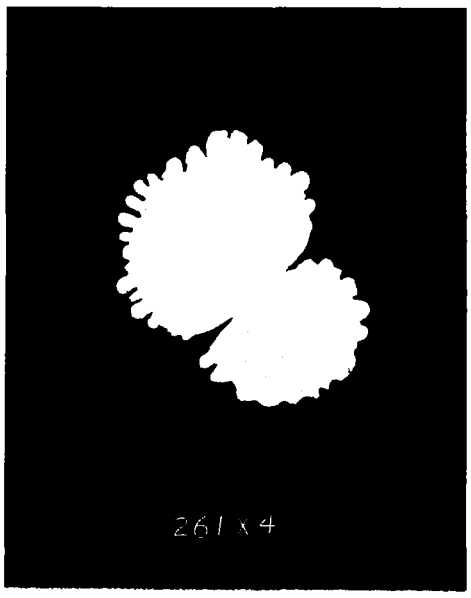
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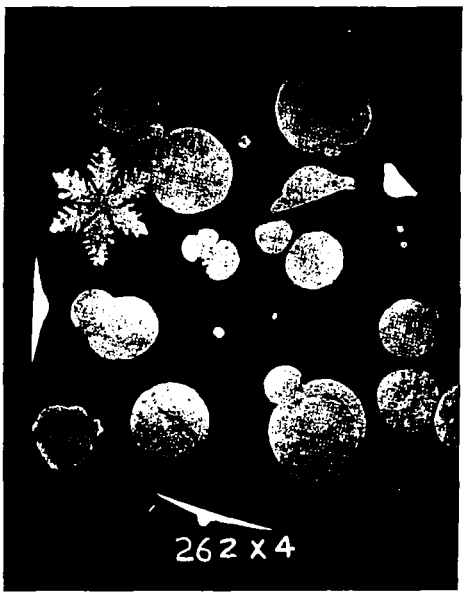
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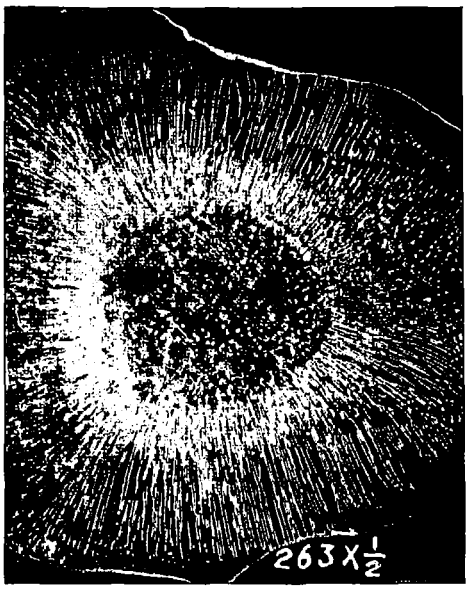
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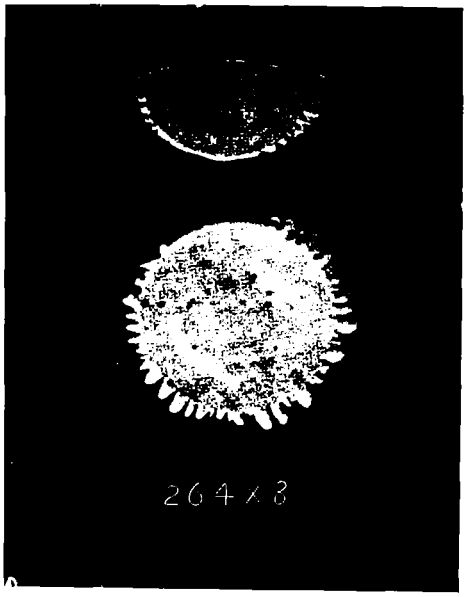
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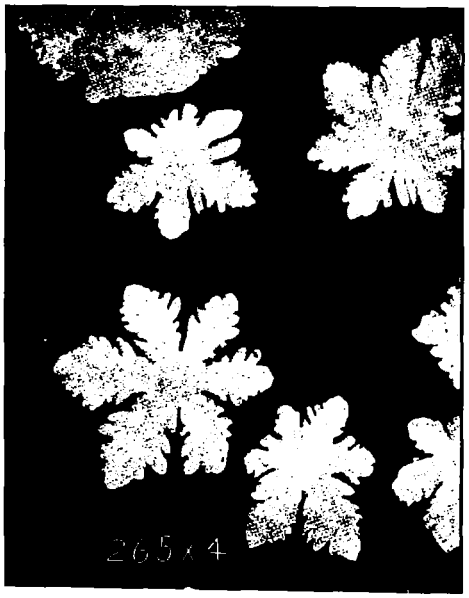
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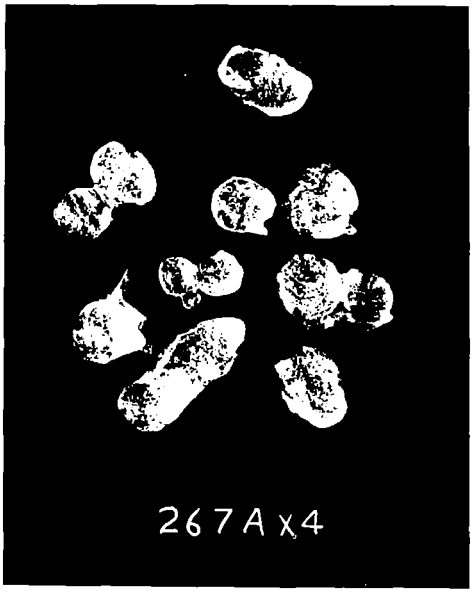
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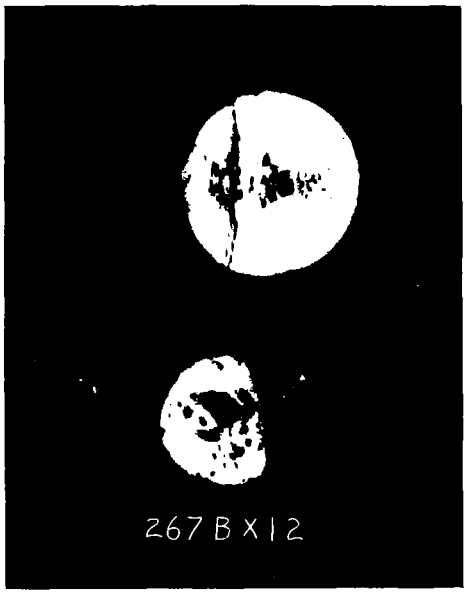
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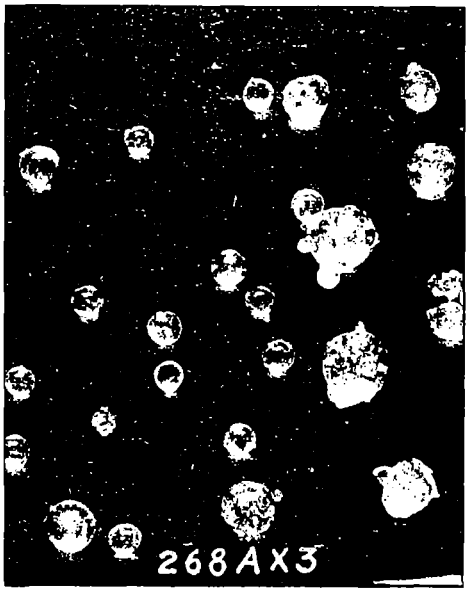
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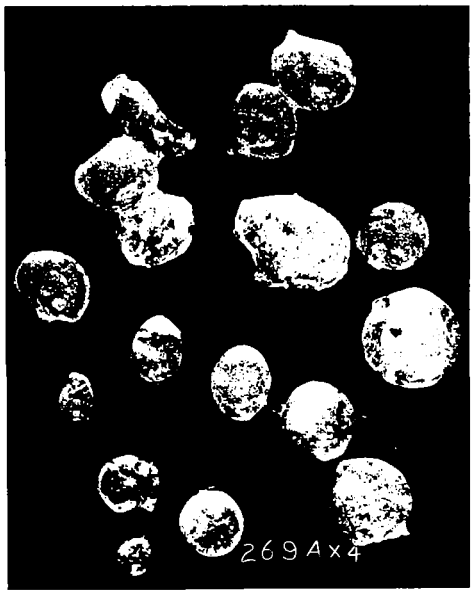
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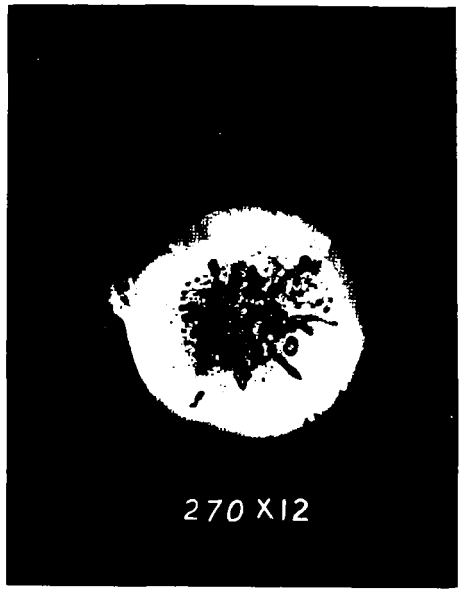
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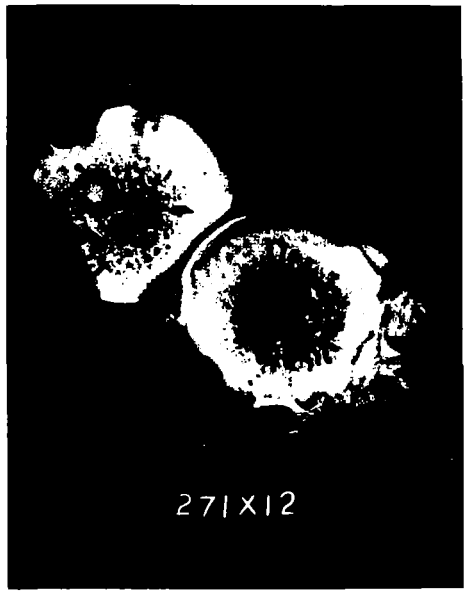
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